DRAFT

BIOLOGICAL RESOURCES ASSESSMENT
for the
SANTA CRUZ MEDICAL OFFICE BUILDING PROJECT

Address: 5940 Soquel Avenue, Santa Cruz

APN: 029-021-47

Owner: PMB Real Estate Services

Permit/Application Type: Development

County Application Number: 191075

Prepared for:

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"I hereby certify that this Biological Resources Assessment was prepared according to the Guidelines established by the County of Santa Cruz Planning Department and that the statements furnished in the report and associated maps are true and correct to the best of my knowledge and belief."

Ryan Henry
Senior Biologist

MAY 2020

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
APN	Assessor's Parcel Number
BMP	best management practice
BSA	biological study area
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFGC	California Fish and Game Code
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
County	County of Santa Cruz
CRPR	California Rare Plant Rank
ESA	Endangered Species Act
IPaC	Inventory for Planning and Conservation
LCP	Local Coastal Program
MBTA	Migratory Bird Treaty Act
MM	Mitigation Measure
OHWM	ordinary high water mark
project	Santa Cruz Medical Office Building Project
RWQCB	Regional Water Quality Control Board
USACE	U.S. Army Corps of Engineers
USC	United States Code
USFWS	U.S. Fish and Wildlife Service

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Executive Summary

The proposed project would involve construction of a specialty medical office building in the Live Oak region of Santa Cruz County, California. The project site is located at 5940 Soquel Avenue (Assessor's Parcel Number 029-021-47) and is bounded by Soquel Avenue and Highway 1 to the north, and between Chanticleer Avenue and Mattison Lane to the west and east. A new, four-story medical office building would be constructed on approximately 160,000 gross square feet. Anticipated services include advanced medical and urgent care clinics, urgent care and outpatient surgery facilities, support services for urgent care and outpatient surgery including pharmacy, laboratory and imaging facilities, and administrative office space. The proposed project would also involve construction of a four-story parking garage across an internal roadway, and a new 48-inch-diameter reinforced concrete stormwater drain from the office building along Soquel Avenue, terminating within the west bank of Rodeo Creek Gulch. The proposed stormwater pipeline would be installed under the westbound Soquel Avenue travel lane and would daylight south of the road at an improved outfall structure located at the edge of the riparian canopy of Rodeo Creek Gulch. For the purposes of this biological assessment, the project site and an approximate 300-foot buffer totaling 44.84 acres were evaluated for biological resources within the biological study area (BSA).

A biological resources reconnaissance survey, vegetation mapping, and formal habitat assessment for California red-legged frog (*Rana draytonii*) were conducted at the proposed office building location and stormwater pipeline plus a 300-foot buffer (BSA) in August 2018 and November 2019. In addition, a focused botanical survey was conducted in May and June 2019, an arborist survey was conducted in October 2018, and an aquatic resources jurisdictional delineation near the stormwater outfall was conducted on May 22, 2019. The purpose of this biological resources technical report is to (1) describe the conditions of biological resources within the project site in terms of vegetation communities, plants, wildlife, wildlife habitats, and wetlands; (2) quantify potential direct and indirect impacts to biological resources that would result from the proposed project; (3) discuss those impacts in terms of biological significance in view of federal, state, and local laws and city policies; and (4) specify measures to mitigate any impacts that would occur to biological resources requiring mitigation.

The BSA supports the following vegetation communities and land covers: disturbed annual grassland (2.29 acres), coast live oak woodland (5.66 acres), and urban/developed (36.89 acres). The BSA supports the riparian canopy of one intermittent drainage (Rodeo Creek Gulch) and one adjacent federal wetland. The BSA contains 2.82 acres of U.S. Army Corps of Engineers jurisdictional wetlands and 7.61 acres of California Department of Fish and Wildlife and Regional Water Quality Control Board jurisdictional streambed and associated riparian habitat, all of which would be considered state wetlands. No special-status plant species are expected to occur within the BSA based on focused botanical survey results. However, three special-status wildlife species have at least a moderate potential to occur adjacent to the project site within the BSA: western pond turtle (*Actinemys marmorata*), pallid bat (*Antrozous pallidus*), and Townsend's big-eared bat (*Corynorhinus townsendii*).

Implementation of the proposed project would result in 0.01 acres of direct permanent and 0.05 acres of direct temporary impacts to coast live oak woodland, which is considered a sensitive natural community due to its riparian nature and potential to support special-status wildlife species (western pond turtle, pallid bat, and Townsend's big-eared bat). The proposed project would also result in 0.01 acres of direct permanent and 0.05 acres of direct temporary impacts to California Department of Fish and Wildlife/Regional Water Quality Control Board jurisdictional streambed and associated riparian habitat. These impacts would be significant absent mitigation.

The proposed project has incorporated standard construction best management practices that would be implemented during construction activities. Implementation of these standard construction best management practices would reduce direct and indirect impacts to these natural resources. Additional mitigation measures to

address significant impacts to western pond turtle, pallid bat, and Townsend's big-eared bat would include avoidance of the nesting bird season (February through August) and peak bat activity timeframes (March through April and August through October), worker environmental awareness training, biological monitoring, and post-construction habitat rehabilitation. Permanently and temporarily impacted coast live oak woodland areas would be re-contoured and returned to pre-project grade, and non-native species would be removed and monitored within impacted areas over a 3-year period. Additionally, potentially significant impacts to jurisdictional non-wetland waters of the state would be mitigated to less than significant through these rehabilitation practices, and would require permits from the California Department of Fish and Wildlife and Regional Water Quality Control Board. Implementation of these measures would reduce impacts to less than significant.

No significant direct or indirect impacts would occur to wildlife movement or use of native wildlife nursery sites associated with project activities. Existing habitat linkages and wildlife corridor functions would remain intact while construction activities are conducted and following completion. The proposed project would not conflict with any local policies or ordinances, nor any approved habitat conservation plans, natural community conservation plans, or other approved local, regional, or state habitat conservation plan.

1 Introduction

This report describes the results of a comprehensive biological resources assessment conducted for the proposed Santa Cruz Medical Office Building Project (project) located within the Live Oak area of unincorporated Santa Cruz County, south of Soquel Avenue between Chanticleer Avenue and Mattison Lane (project site) (Figure 1, Project Location). PMB Real Estate Services proposes development and construction of a new, four-story specialty medical office building, parking garage, and stormwater drainage system (the proposed project). The medical office building would contain advanced medical and urgent care clinics, urgent care and outpatient surgery facilities, and other support services such as pharmacy, laboratory, imaging facilities, and administrative office space.

The purpose of this report is to (1) describe the conditions of biological resources within the project site in terms of vegetation communities, plants, wildlife, wildlife habitats, and wetlands; (2) quantify potential direct and indirect impacts to biological resources that would result from the proposed project; (3) discuss those impacts in terms of biological significance in view of federal, state, and local laws and County of Santa Cruz (County) policies; and (4) specify measures to avoid, minimize, and/or mitigate any adverse impacts that would occur to biological resources as a result of project implementation. This assessment is intended to support the project's Environmental Impact Report, which is currently being prepared as part of the environmental review pursuant to the California Environmental Quality Act (CEQA). This biological resources assessment was conducted in compliance with CEQA Sections 15064 and 15605, and followed policies described in the Santa Cruz County General Plan and Local Coastal Program (County of Santa Cruz 1994), and Santa Cruz County Code Chapters 16.30 (Riparian Corridor and Wetlands Protection), 16.32 (Sensitive Habitat Protection), and 16.34 (Significant Trees Protection).

1.1 Project Location

The project's medical office building site is located at 5940 Soquel Avenue, which is identified as a single parcel (Assessor's Parcel Number [APN] 029-021-47) within the County's Urban Services Boundary. The parcel is approximately 4.98 acres and located on the southern frontage of Soquel Avenue, just south of State Route (Highway) 1. The intersection of Soquel Avenue and Chanticleer Avenue is approximately 730 feet west of the project site. The proposed stormwater pipeline would be installed under the westbound Soquel Avenue and would daylight south of the road at an improved outfall structure located at the edge of the riparian canopy of Rodeo Creek Gulch. The project site is located in Section 9 of Township 11 South, Range 1 West of the Soquel California 7.5-minute U.S. Geological Survey quadrangle map (Figure 1).

For the purposes of this analysis, a 300-foot buffer was established around the project site to describe biological resources within the immediate vicinity of the project site, for a total of 44.84 acres (the biological study area [BSA]).

1.2 Project Setting

The BSA is characterized by highly disturbed and previously developed land covers within an urbanized setting. The project site is currently zoned RM-2-R (Multi-Family Residential) and has a General Plan designation of R-UH (Urban High-Density Residential). The proposed location for the medical office building is relatively flat with frontage on a segment of Soquel Avenue that parallels Highway 1. The site for the medical office building is flat and provides yard space for numerous businesses, including those for towing, landscaping, and storage. The site is characterized by a paved and graveled surface surrounded by chain-link fencing. Structures on the site consist of small, scattered, modular units, and numerous vehicles are parked and stored across the site. Existing vegetation on the site is

limited to scattered ruderal and ornamental plant species, including a few trees concentrated along the southern and western perimeter of the for the medical office building site.

The proposed stormwater pipeline alignment is also characterized by disturbed and previously developed land covers with ornamental plantings associated with Soquel Avenue. At the stormwater pipeline outlet, disturbed annual grasslands and riparian oak woodland associated with Rodeo Creek Gulch occur to the south and east.

The surrounding area is substantially developed and is dominated by commercial land uses, streets, and parking lots. The project site is bounded by Soquel Avenue to the north, commercial development to the west, residential development to the south, and storage and landscape supply facilities to the east.

1.3 Project Description

The proposed project would involve construction of a new four-story medical office building measuring approximately 60 feet in height to finished roof and approximately 74 feet to the top of mechanical screens on the rooftop. The proposed building would provide approximately 160,000 gross square feet of medical office use for specialized outpatient services. Anticipated services include advanced medical and urgent care clinics; urgent care and outpatient surgery facilities; and support services for urgent care and outpatient surgery, including pharmacy, laboratory, and imaging facilities, and administrative office space. The proposed project would also involve construction of a four-story parking garage across an internal roadway west of the medical office building.

The proposed medical office building would be located on the eastern half of the site and would front Soquel Avenue. The proposed parking garage would be located on the western half of the site, set back from Soquel Avenue. A new driveway would be constructed from Soquel Avenue that facilitates circulation between the medical office building and parking garage. A separate driveway for service vehicles would be constructed to provide access to the rear of the medical office building. A landscaped outdoor area with an approximately 4-foot-wide pedestrian pathway would be constructed at the far southern end of the site, providing a buffer between the proposed project and the existing residential community to the south. All current on-site uses would be removed or demolished prior to grading and project construction.

The proposed project would also require utility and drainage improvements, including new 8-inch-diameter sanitary sewer, 8-inch-diameter fire, and 4-inch-diameter domestic water lines. Pacific Gas & Electric would provide gas and electric service, and the project would also include photovoltaic solar panels on the rooftop level of the parking garage. The proposed project would also involve off-site sanitary sewer and stormwater drainage improvements to accommodate the increased demand on infrastructure. The stormwater pipeline would occur along Soquel Avenue from APN 029-021-47 to the west bank of Rodeo Creek Gulch. A 48-inch-diameter reinforced concrete pipe culvert would be installed under westbound Soquel Avenue and would daylight south of the road at the edge of the riparian canopy of Rodeo Creek Gulch, for a total length of approximately 1,170 linear feet. The storm drain outfall design would consist of a concrete headwall with flared ends and a rock riprap apron.

The proposed project and detailed site plan for the medical office building and stormwater drainage improvements are illustrated on Figures 2A and 2B, respectively.

1.4 Project Design Features

The proposed project would include features and involve activities that would be implemented during construction to minimize potential environmental impacts. Additionally, the project would be required to adhere to applicable regulatory requirements. The following standard construction practices/best management practices (BMPs) would be implemented during construction activities. These project design features and regulatory requirements are presented below.

Erosion Control

- Implement erosion control best management practices for all construction activities occurring in or adjacent to jurisdictional aquatic resources (resources subject to permitting under Clean Water Act Section 404, Clean Water Act Section 401, and/or California Fish and Game Code [CFGC] Section 1600). These measures may include, but are not limited to, (1) installation of silt fences, fiber or straw rolls, and/or bales along limits of work/construction areas and from the edge of the water course; (2) covering of stockpiled spoils; (3) revegetation and physical stabilization of disturbed graded and staging areas; and (4) sediment control including fencing, dams, barriers, berms, traps, and associated basins.
- Provide stockpile containment and exposed soil stabilization structures (e.g., Visqueen plastic sheeting, fiber or straw rolls, gravel bags, and/or hydroseed).

Water Quality Protection

- Locate and stabilize spoil disposal sites and other debris areas such as concrete wash sites. Sediment control measures shall be implemented so that sediment is not conveyed to waterways or jurisdictional resources (resources subject to permitting under Clean Water Act Section 404, Clean Water Act Section 401, and/or CFGC Section 1600).
- Minimize potential for hazardous spills from heavy equipment by not storing equipment or fueling within a minimum of 65 feet of any active stream channel or water body unless approved by permitting agencies, along with implementation of additional spill prevention methods such as secondary containment and inspection.
- Ensure that gas, oil, or any other substances that could be hazardous to aquatic life or pollute habitat are prevented from contaminating the soil or entering waters of the state or of the United States by storing these types of materials within an established containment area. Vehicles and equipment shall have spill kits available, be checked daily for leaks, and be properly maintained to prevent contamination of soil or water from external grease and oil, or from leaking hydraulic fluid, fuel, oil, and grease. Any gas, oil, or other substance that could be considered hazardous shall be stored in water-tight containers with secondary containment. Emergency spill kits shall be on site at all times.
- Prevent equipment fluid leaks through regular equipment inspections.
- Implement proper waste/trash management.

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2 Regulatory Setting

2.1 Federal

2.1.1 Clean Water Act

The Federal Water Pollution Control Act of 1972 (Clean Water Act) (33 United States Code [USC] 1251 et seq.), as amended by the Water Quality Act of 1987 (PL 100-4), is the major federal legislation governing water quality. The purpose of the Clean Water Act is to "restore and maintain the chemical, physical, and biological integrity of the nation's waters." Discharges into waters of the United States are regulated under Section 404. Waters of the United States include (1) all navigable waters (including all waters subject to the ebb and flow of tides); (2) all interstate waters and wetlands; (3) all other waters, such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sand flats, wetlands, sloughs, and natural ponds; (4) all impoundments of waters mentioned above; (5) all tributaries to waters mentioned above; (6) the territorial seas; and (7) all wetlands adjacent to waters mentioned above. In California, the State Water Resources Control Board and the nine Regional Water Quality Control Boards (RWQCBs) are responsible for implementing the Clean Water Act. Important applicable sections of the Clean Water Act are as follows:

- Section 401 requires an applicant for any federal permit for an activity that may result in a discharge to waters of the United States to obtain certification from the state that the discharge will comply with other provisions of the Clean Water Act. Certification is provided by the respective RWQCB.
- Section 402 establishes the National Pollutant Discharge Elimination System, a permitting system for the discharge of any pollutant (except for dredge or fill material) into waters of the United States. The National Pollutant Discharge Elimination System program is administered by the RWQCB. Conformance with Section 402 is typically addressed in conjunction with water quality certification under Section 401.
- Section 404 provides for issuance of dredge/fill permits by the U.S. Army Corps of Engineers (USACE). Permits typically include conditions to minimize impacts on water quality. Common conditions include USACE review and approval of sediment quality analysis before dredging, a detailed pre- and post-construction monitoring plan that includes disposal site monitoring, and required compensation for loss of waters of the United States.

2.1.2 Federal Endangered Species Act

The federal Endangered Species Act (ESA) of 1973 (16 USC 1531 et seq.), as amended, is administered by the U.S. Fish and Wildlife Service (USFWS) for most plant and animal species, and by the National Oceanic and Atmospheric Administration National Marine Fisheries Service for certain marine species. This legislation is intended to provide a means to conserve the ecosystems upon which endangered and threatened species depend, and to provide programs for the conservation of those species, thus preventing the extinction of plants and wildlife. The federal ESA defines an endangered species as "any species that is in danger of extinction throughout all or a significant portion of its range." A threatened species is defined as "any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." Under the federal ESA, it is unlawful to take any listed species; "take" is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." The federal ESA provides for designation of critical habitat,

defined in federal ESA Section 3(5)(A) as specific areas within the geographical range occupied by a species where physical or biological features "essential to the conservation of the species" are found and that "may require special management considerations or protection." Critical habitat may also include areas outside the current geographical area occupied by the species that are nonetheless "essential for the conservation of the species." Critical habitat designations identify, with the best available knowledge, those biological and physical features (primary constituent elements) that provide for the life history processes essential to the conservation of the species.

The federal ESA allows for the issuance of incidental take permits for listed species under Section 7, which is generally available for projects that also require other federal agency permits or other approvals, and under Section 10, which provides for the approval of habitat conservation plans on private property without any other federal agency involvement.

2.1.3 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) was originally passed in 1918 as four bilateral treaties, or conventions, for the protection of a shared migratory bird resource. The primary motivation for the international negotiations was to stop the "indiscriminate slaughter" of migratory birds by market hunters and others. The MBTA protects more than 800 species of birds (including their parts, eggs, and nests) from killing, hunting, pursuing, capturing, selling, and shipping unless expressly authorized or permitted.

2.2 State

2.2.1 California Environmental Quality Act

CEQA requires identification of a project's potentially significant impacts on biological resources and ways that such impacts can be avoided, minimized, or mitigated. CEQA also provides guidelines and thresholds for use by lead agencies for evaluating the significance of proposed impacts.

CEQA Guidelines Section 15380(b)(1) defines endangered animals or plants as species or subspecies whose "survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors" (14 California Code of Regulations [CCR] 15380[b][1]). A rare animal or plant is defined in Section 15380(b)(2) as a species that, although not presently threatened with extinction, exists "in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens; or … [t]he species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered 'threatened' as that term is used in the federal Endangered Species Act." Additionally, an animal or plant may be presumed to be endangered, rare, or threatened if it meets the criteria for listing, as defined further in CEQA Guidelines Section 15380(c).

The California Department of Fish and Wildlife (CDFW) has developed a list of "Special Species" as "a general term that refers to all of the taxa the California Natural Diversity Database (CNDDB) is interested in tracking, regardless of their legal or protection status." This is a broader list than those species that are protected under the federal ESA, the California ESA, and other CFGC provisions, and includes lists developed by other organizations, for example, the Audubon Watch List Species. Guidance documents prepared by other agencies, including the Bureau of Land Management Sensitive Species and USFWS Birds of Special Concern, are also included on this CDFW Special Species list. Additionally, CDFW has concluded that plant species included on the California Native Plant

Society's (CNPS) California Rare Plant Rank (CRPR) List 1 and 2, and potentially some List 3 plants, are covered by CEQA Guidelines Section 15380.

Section IV, Appendix G (Environmental Checklist Form), of the CEQA Guidelines requires an evaluation of impacts to "any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service" (14 CCR 15000 et seq.).

2.2.2 California Endangered Species Act

The California ESA (CFGC Section 2050 et seq.) provides protection for and prohibits the take of plant, fish, and wildlife species listed by the State of California. Unlike the federal ESA, state-listed plants have the same degree of protection as wildlife, but insects and other invertebrates may not be listed. "Take" is defined similarly to the federal ESA and is prohibited for both listed and candidate species. Take authorization may be obtained by the project applicant from the CDFW under California ESA Section 2081, which allows take of a listed species for educational, scientific, or management purposes. In this case, private developers consult with the CDFW to develop a set of measures and standards for managing the listed species, including full mitigation for impacts, funding of implementation, and monitoring of mitigation measures.

2.2.3 California Fish and Game Code

Fully Protected Species

The classification of "fully protected" was the state's initial effort in the 1960s to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, mammals, amphibians and reptiles, birds, and mammals. Fully protected species may not be taken or possessed at any time, and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock. "Take" is defined as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill."

Lake and Streambed Alteration

Under CFGC Section 1602, CDFW has authority to regulate work that will substantially divert or obstruct the natural flow of or substantially change or use any material from the bed, channel, or bank of any river, stream, or lake. CDFW also has authority to regulate work that will deposit or dispose of debris, water, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake. This regulation takes the form of a requirement for a Lake or Streambed Alteration Agreement and is applicable to any person, state, or local governmental agency or public utility (CFGC Section 1601). CDFW jurisdiction includes ephemeral, intermittent, and perennial watercourses (including dry washes) and lakes characterized by the presence of a definable bed and banks and existing fish or wildlife resources. In practice, CDFW marks its jurisdictional limit at the top of the stream or lake bank or the outer edge of the riparian vegetation, where present, and sometimes extends its jurisdiction to the edge of the 100-year floodplain. Because riparian habitats do not always support wetland hydrology or hydric soils, wetland boundaries, as defined by Clean Water Act Section 404, sometimes include only portions of the riparian habitat adjacent to a river, stream, or lake. Therefore, jurisdictional boundaries under CFGC Section 1602 may encompass a greater area than those regulated under Clean Water Act Section 404; CDFW does not have jurisdiction over ocean or shoreline resources.

California Fish and Game Code Sections 3503, 3511, 3513, 4150

CFGC Section 3503 states that it is unlawful to take, possess, or needlessly destroy the nests or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. CFGC Section 3503.5 protects all birds-of-prey (raptors) and their eggs and nests. CFGC Section 3511 states that fully protected birds or parts thereof may not be taken or possessed at any time. CFGC Section 3513 states that it is unlawful to take or possess any migratory nongame bird as designated in the MBTA. All nongame mammals, including bats, are protected by CFGC Section 4150.

2.2.4 Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act established the State Water Resources Control Board and RWQCBs as the principal state agencies responsible for the protection of water quality in California. The Central Coast RWQCB has regulatory authority over the project site. The Porter-Cologne Water Quality Control Act provides that "All discharges of waste into the waters of the State are privileges, not rights." Waters of the State are defined in Section 13050(e) of the Porter-Cologne Water Quality Control Act as "any surface water or groundwater, including saline waters, within the boundaries of the state." All dischargers are subject to regulation under the Porter-Cologne Water Quality Control Act, including both point- and nonpoint-source dischargers. The Central Coast RWQCB has the authority to implement water quality protection standards through the issuance of permits for discharges to waters at locations within its jurisdiction. As noted above, the Central Coast RWQCB is the appointed authority for Section 401 compliance on the project site.

2.2.5 California Native Plant Protection Act

The Native Plant Protection Act of 1977 directed the CDFW to carry out the Legislature's intent to "preserve, protect, and enhance rare and endangered plants in this State." The Native Plant Protection Act gave the California Fish and Game Commission the power to designate native plants as "endangered" or "rare," and to protect endangered and rare plants from take. The California ESA expanded on the original Native Plant Protection Act and enhanced legal protection for plants, but the Native Plant Protection Act remains part of the CFGC. To align with federal regulations, the California ESA created the categories of "threatened" and "endangered" species. It converted all "rare" animals as threatened species, but did not do so for rare plants. Thus, there are three listing categories for plants in California: rare, threatened, and endangered. Because rare plants are not included in the California ESA, appropriate compensatory mitigation measures for significant impacts to rare plants are typically negotiated between the CDFW and the project proponent.

2.3 Local

2.3.1 County of Santa Cruz General Plan and Local Coastal Program

The Santa Cruz County General Plan and Local Coastal Program (LCP) is a comprehensive, long-term planning document for the unincorporated areas of the County, and includes the County's LCP, which was certified by the California Coastal Commission in 1994 (County of Santa Cruz 1994). The County General Plan and LCP provides policies and programs to establish guidelines for future growth and all types of physical developments.

The County's General Plan, Chapter 5, Conservation and Open Space, Objective 5.2, Riparian Corridors and Wetlands, establishes definitions for riparian corridors and wetlands to ensure their protection. Policies 5.2.1 through 5.2.5 identify and define riparian corridors and wetlands, determine the uses that are allowed in and adjacent to these habitats, and specify required buffer setbacks and performance standards for land in and adjacent to these areas. Riparian corridors are defined as 50 feet from the top of a distinct channel or physical evidence of high water mark of perennial stream; 30 feet from the top of a distinct channel or physical evidence of high water mark of an intermittent stream as designated on the General Plan maps and through field inspection of undesignated intermittent and ephemeral streams; 100 feet of the high water mark of a lake, wetland, estuary, lagoon, or natural body of standing water; the landward limit of a riparian woodland plant community; and wooded arroyos within urban areas (County of Santa Cruz 1994). The County definitions are consistent with those used for CEQA purposes.

The County certified LCP is administered by the County Planning Department, pursuant to the California Coastal Act, and includes specific plans and ordinances for activities within the Coastal Zone. The LCP implementing ordinances in the County Code that are particularly relevant in the evaluation of biological resources of the proposed project include the following:

- Grading Ordinance (Chapter 16.20)
- Erosion Control Ordinance (Chapter 16.22)
- Riparian Corridor and Wetlands Protection (Chapter 16.30)
- Sensitive Habitat Protection (Chapter 16.32)
- Significant Trees Protection (Chapter 16.34)

Because the proposed project does not occur within the Coastal Zone and is exempt from the LCP, it would not require compliance with the LCP or the standards contained in the above LCP implementing ordinances. The proposed project would not require a Coastal Development Permit. However, some of the other ordinances require separate approvals or permits (e.g., Riparian Exception) and would be required for the proposed project. The relevant implementing ordinances are described below.

2.3.1.1 Grading and Erosion Control Ordinances

Santa Cruz County Code Chapter 16.20, Grading Regulations, sets forth rules and regulations to control all grading, including excavations, earthwork, road construction, dredging, diking, fills, and embankments. Santa Cruz County Code Chapter 16.22 requires control of all existing and potential conditions of accelerated (human-induced) erosion, and sets forth required provisions for project planning, preparation of erosion control plans, runoff control, land clearing, and winter operations.

2.3.1.2 Riparian Corridor Protection Ordinance

Santa Cruz County Code Chapter 16.30, Riparian Corridor and Wetlands Protection, includes regulations to limit development activities in riparian corridors. The regulations provide that "no project shall undergo developmental activities in riparian corridors or areas with urban or rural service lines which are within a buffer zone as measured from the top of the arroyo." Buffer areas are specified in the regulations and are determined from characteristics found in the riparian area, including average slope within 30 feet of water's edge, vegetation, and stream characteristics. The buffer always extends 50 feet from the edge of riparian woodland and 20 feet beyond the edge of other woody vegetation, as determined by the dripline. After the buffer is determined, a 10-foot setback from the

edge of the buffer is required for all structures, which allows construction equipment and use of a yard area. Exceptions and conditioned exceptions to the provisions of this code may be authorized. Findings meeting the following criteria define the circumstances necessary in granting an exception to the above requirements:

1. That there are special circumstances or conditions affecting the property.
2. That the exception is necessary for the proper design and function of some permitted or existing activity on the property.
3. That the granting of the exception will not be detrimental to the public welfare or injurious to other property downstream or in the area in which the project is located.
4. That the granting of the exception, in the Coastal Zone, will not reduce or adversely impact the riparian corridor, and there is no feasible less environmentally damaging alternative.
5. That the granting of the exception is in accordance with the purpose of this chapter, and with the objectives of the General Plan and elements thereof, and the Local Coastal Program Land Use Plan.

2.3.1.3 Sensitive Habitats Protection Ordinance

Santa Cruz County Code Chapter 16.32 regulates development in or adjacent to specified environmentally sensitive habitat areas. An area defined as "sensitive habitat" under this ordinance includes various criteria, and includes all lakes, wetlands, estuaries, lagoons, streams, rivers, and riparian corridors. No development activity may occur within an area of biotic concern unless approval is issued or unless the activity is reviewed concurrently with the review of an associated development or land division application. All development within environmentally sensitive habitat must be mitigated or restored. The following findings are necessary in granting an exception to the provisions and requirements of this ordinance:

1. that adequate measures will be taken to ensure consistency with the purpose of this chapter to minimize the disturbance of sensitive habitats; and
2. one of the following situations exists:
    a. the exception is necessary for restoration of a sensitive habitat; or
    b. it can be demonstrated by biotic assessment, biotic report, or other technical information that the exception is necessary to protect public health, safety, or welfare.

Any development activity that has received a riparian exception according to the provisions of Santa Cruz County Code Chapter 16.30 would not be subject to this chapter. Given that a riparian exception is expected to apply to the proposed project, the Significant Habitats Protection Ordinance is not further discussed in this report.

2.3.1.4 Significant Trees Protection Ordinance

Santa Cruz County Code Chapter 16.34 regulates the removal of trees in the Coastal Zone that could reduce scenic beauty and the attractiveness of the area to residents and visitors. The ordinance establishes the type of trees to be protected, the circumstances under which they may be removed, and the procedures for obtaining a permit for their removal. This chapter defines Significant Trees (Santa Cruz County Code Section 16.34.030) as "any tree, sprout clump, or group of trees," as follows:

> (A) Within the urban services line or rural services line, any tree which is equal to or greater than 20 inches d.b.h. (approximately five feet in circumference); any sprout clump of five or more stems

each of which is greater than 12 inches d.b.h. (approximately three feet in circumference); or any group consisting of five or more trees on one parcel, each of which is greater than 12 inches d.b.h. (approximately three feet in circumference).

(B) Outside the urban services line or rural services line, where visible from a scenic road, any beach, or within a designated scenic resource area, any tree which is equal to or greater than 40 inches d.b.h. (approximately 10 feet in circumference); any sprout clump of five or more stems, each of which is greater than 20 inches d.b.h. (approximately five feet in circumference); or, any group consisting of 10 or more trees on one parcel, each greater than 20 inches d.b.h. (approximately five feet in circumference).

(C) Any tree located in a sensitive habitat as defined in Chapter 16.32 SCCC. Also see SCCC 16.34.090(C), exemption of projects with other permits.

A tree removal permit will not be required since the project site occurs outside of the Coastal Zone.

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3 Methods

Data regarding biological resources present within the 44.84-acre BSA were obtained through a review of pertinent literature, field reconnaissance, an aquatic resources jurisdictional delineation, and habitat assessments, which are described in detail below. For purposes of this report, special-status resources are defined as follows:

- Special-status plant species include (1) species designated as either rare, threatened, or endangered by the CDFW or USFWS and are protected under either the California ESA (CFGC Section 2050 et seq.) or the federal ESA (16 USC 1531 et seq.); (2) species that are candidate species being considered or proposed for listing under the federal or California ESA; (3) species that are included on the CDFW Special Vascular Plants, Bryophytes, and Lichens List (CDFW 2020a), or species with a CRPR of 1 or 2 in the CNPS Inventory of Rare and Endangered Plants of California (CNPS Inventory) (CNPS 2020); (4) species given protection under the City of Santa Cruz General Plan and Municipal Code.
- Special-status wildlife species include (1) species designated as either rare, threatened, or endangered by the CDFW or USFWS and are protected under either the California ESA (CFGC Section 2050 et seq.) or the federal ESA (16 USC 1531 et seq.); (2) species that are candidate species being considered or proposed for listing under the federal or California ESA; (3) species that are included on the CDFW Special Animals List (CDFW 2019a).
- Special-status vegetation communities are those designated as sensitive by the CDFW or those that provide habitat for special-status species.

3.1 Literature Review

Prior to field surveys, special-status biological resources present or potentially present within the BSA were identified through queries of the City of Santa Cruz Online GIS database (City of Santa Cruz 2020), CNDDB (CDFW 2020b), USFWS Inventory for Planning and Conservation (IPaC) database (USFWS 2020a), the CNPS Inventory (CNPS 2020), and U.S. Department of Agriculture Web Soil Survey (USDA 2020a). The CNPS Inventory and CNDDB were queried based on the U.S. Geological Survey 7.5-minute quadrangle where the BSA is located (Soquel) and the six surrounding quadrangles (Santa Cruz, Felton, Laurel, Loma Prieta, Watsonville West, and Moss Landing). The USFWS IPaC database was queried using GIS software based on a 1-mile buffer around the BSA.

General information regarding wildlife species distribution in the region and potential presence within the BSA was primarily obtained from the Cornell Lab of Ornithology (2016) for birds, Hall (1981) for mammals, and Stebbins (2003) for reptiles and amphibians.

3.2 Field Surveys

An initial reconnaissance-level field survey of the proposed medical office building parcel to document biological resources and vegetation communities was conducted by Dudek biologist Lidia D'Amico on August 7, 2018 (Appendix A). The survey was conducted to assess current habitat conditions and evaluate the parcel's potential to support special-status plant and wildlife species and sensitive vegetation communities. An arborist survey of the parcel to identify and inventory trees on and immediately adjacent to the parcel was conducted by Dudek certified arborist Scott Eckardt on October 15, 2018 (Appendix B). Additional field surveys included a reconnaissance-level biological resources evaluation of three alternative stormwater pipeline alignments and a 300-foot buffer (Appendix

C). Dudek biologist Ryan Henry and water infrastructure scientist Sheldon Leiker visited the proposed stormwater pipeline alignments and 300-foot buffer on April 23, 2019, to assess current conditions and evaluate the site's potential to support sensitive natural communities and special-status plant and wildlife species. Due to the potential for the stormwater drain alignments and 300-foot buffer to support special-status plants and wildlife, additional assessments were conducted within this eastern portion of the BSA.

Focused botanical surveys were conducted on May 22 and June 20, 2019, to determine the presence of any special-status plants (Appendix D). On May 22, 2019, Dudek environmental scientists Sheldon Leiker and Lasthenia Michele Lee also conducted an aquatic resources jurisdictional delineation to identify and map potential waters of the United States, including wetlands, under USACE jurisdiction, pursuant to Section 404 of the federal Clean Water Act; RWQCB, pursuant to the Section 401 of the Clean Water Act and the Porter-Cologne Water Quality Control Act (Porter-Cologne Act); and CDFW, pursuant to Section 1602 of the CFGC (Appendix E). Additionally, a formal California red-legged frog (*Rana draytonii*) habitat assessment of the three alternative stormwater pipeline alignments was conducted by Bryan Mori Biological Consulting Services on November 13, 2019 (Mori 2019).

Table 1 lists the dates, focus, scope, conditions, and personnel for each survey, and Appendix F provides photographs throughout the BSA that were taken during the survey efforts.

Table 1. Summary of Surveys

Date	Time	Type of Survey	Scope of Survey	Survey Conditions	Biologists
08/07/2018	1000–1100	Biological reconnaissance survey, vegetation mapping	BSA – Medical office building parcel	71°F–74°F, 50%–75% CC, 5 mph wind	LD
10/15/2018	1100–1300	Arborist survey	BSA – Medical office building parcel	69°F–76°F, 10%–40% CC, 0–5 mph wind	SE
04/23/2019	1000–1100	Biological reconnaissance survey, vegetation mapping	BSA – Stormwater pipeline outlet plus 300-foot buffer	72°F–77°F, 10%–40% CC, 0–6 mph wind	RH, SL
05/22/2019	0740–1030	Aquatic resources jurisdictional delineation	BSA – Stormwater pipeline outlet plus 300-foot buffer	54°F–60°F, 20%–50% CC, 5–10 mph wind	LL, SL
05/22/2019	1030–1430	Focused botanical survey (Pass 1)	BSA – Stormwater pipeline outlet plus 300-foot buffer	60°F–70°F, 20%–75% CC, 5–15 mph wind	LL, SL
06/20/2019	0910–1045	Focused botanical survey (Pass 2)	BSA – Stormwater pipeline outlet plus 300-foot buffer	57°F–59°F, 100% CC, 3–5 mph wind	LL
11/13/2019	Morning	CRLF habitat assessment	BSA – Stormwater pipeline outlet plus 1-mile buffer	Not documented	BM

Survey Notes: BSA = biological study area; CRLF = California red-legged frog
Survey Conditions: °F = degrees Fahrenheit; mph = miles per hour; CC = cloud cover.
Biologists: BM = Bryan Mori; LD = Lidia D'Amico; LL = Lasthenia Michele Lee; RH = Ryan Henry; SE = Scott Eckardt; SL = Sheldon Leiker.

3.2.1 Vegetation Communities and Land Covers

Dudek used CDFW's Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (CDFW 2018) and the California Natural Communities List (CDFW 2019b) to map the entire BSA. Vegetation communities and land covers were delineated to the vegetation alliance level, and where appropriate, the association level.

Vegetation communities and land uses within the BSA were mapped in the field directly onto a 1:2,400-scale (1 inch = 200 feet), aerial-photograph-based field map. A minimum mapping unit of 2.2 acres was established to standardize the mapping protocol among biologists. A Dudek GIS analyst processed the vegetation boundaries as delineated by the field biologists and created a GIS coverage for vegetation communities using ArcGIS software. Once major linework and community designations were completed, a geodatabase was created to help ensure the data was topologically correct and met final quality assurance/quality control procedures.

3.2.2 Plants

All plant species encountered during the field surveys were identified and recorded. Species that could not be identified immediately were collected and brought into the laboratory for further investigation. Latin and common names for plant species with a CRPR (formerly "CNPS List") follow the CNPS Inventory (CNPS 2020). For plant species without a CRPR, Latin names follow the Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California (Jepson Flora Project 2020) and common names follow the California Natural Communities List (CDFW 2019b) or the U.S. Department of Agriculture Natural Resources Conservation Service PLANTS Database (USDA 2020b).

3.2.3 Wildlife

Wildlife species detected during field surveys by sight, calls, tracks, scat, or other signs were recorded. Binoculars (10 × 42 power) were used to aid in the identification of observed wildlife throughout the BSA. In addition to species actually detected, expected wildlife use of the BSA was determined by known habitat preferences of local species and knowledge of their relative distributions in the area.

Sources for common and scientific names used for wildlife included Crother (2012) for reptiles and amphibians, American Ornithologists' Union (AOU 2012) for birds, Wilson and Reeder (2005) for mammals, the North American Butterfly Association (NABA 2001) for butterflies, and Moyle (2002) for fish.

3.2.3.1 California Red-Legged Frog Habitat Assessment

The California red-legged frog habitat assessment was conducted following the USFWS's Revised Guidance on Site Assessments and Field Surveys for the California Red-legged Frog (USFWS 2005). The assessment included an evaluation of general upland and aquatic resources within and adjacent to the BSA, which focused on the vicinity of Rodeo Creek Gulch, as well as a review of species occurrence records in the CNDDB for localities of California red-legged frog within an approximate 1-mile radius of the project site. Other information sources on local occurrences included results of the CNDDB database, and local studies, and consultation with local biologist to document relevant observations of California red-legged frog in the BSA. A review of Google Earth imagery was also conducted during the desktop exercise to identify potential habitat types within a 1-mile radius.

A pedestrian survey within the BSA was conducted by Bryan Mori on November 13, 2019, and the overall assessment was expanded to include the 1-mile buffer to evaluate the surrounding landscape and document relevant species observations. Aquatic habitats were mapped and characterized, which included collecting data on vegetation, water depth, bank full depth, stream gradient, substrate, and bank features. Other information collected included presence of aquatic predators, adjacent land uses, and barriers to California red-legged frog movement.

3.2.4 Aquatic Resources Jurisdictional Delineation

A formal aquatic resources jurisdictional delineation was conducted by Dudek biologists within the BSA. The delineation focused on the stormwater pipeline and outfall structure located in the eastern portion of the BSA. The Three alternative alignments for the stormwater pipeline were analyzed, which included a portion of the Rodeo Creek Gulch floodplain. Prior to visiting the site, potential and historic drainages and aquatic features were investigated based on a review of the following: U.S. Geological Survey topographic maps (1:24,000 scale), aerial photographs, the National Wetland Inventory database (USFWS 2020b), and the Natural Resource Conservation Service Web Soil Survey (USDA and NRCS 2018). Following the initial data collection, Dudek biologists Sheldon Leiker and Lasthenia Michele Lee performed a formal (routine) wetlands delineation on May 22, 2019. All areas that were identified as being potentially subject to the jurisdiction of the USACE, RWQCB, and/or CDFW were field verified and mapped.

The USACE wetlands delineation was performed in accordance with the Wetlands Delineation Manual (USACE 1987); Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (USACE 2010); A Guide to Ordinary High Water Mark (OHWM) Delineation for Non-Perennial Streams in the Western Mountains, Valleys, and Coast Region of the United States (Mersel and Lichvar 2014); and changes to 33 Code of Federal Regulations, Part 328 provided by the USACE and U.S. Environmental Protection Agency on the geographic extent of jurisdiction based on the U.S. Supreme Court's interpretation of the Clean Water Act (USACE and EPA 2007). Non-wetland waters of the United States were delineated based on the limits of an OHWM. During the jurisdictional delineation, drainage features were examined for evidence of an OHWM, saturation, permanence of surface water, wetland vegetation, and nexus to a traditional navigable water of the United States. If any of these criteria were met, transects were run to determine the extent of each regulatory agency's jurisdiction.

Transects were taken approximately every 300 feet or greater if streambed conditions were unchanged. Data on transect widths, dominant vegetation present within the drainage and in the adjacent uplands, and channel morphology were recorded on field forms. In areas where USACE jurisdictional wetlands were suspected, data on vegetation, hydrology, and soils were collected along transects.

Areas regulated by the RWQCB are generally coincident with the USACE, but include features isolated from navigable waters of the United States that have evidence of surface water inundation. CDFW jurisdiction was defined to the bank of the stream/channels or to the limit of the adjacent riparian vegetation.

Drainage features were mapped during the field observation to obtain characteristic parameters and detailed descriptions using standard measurement tools. The location of transects, upstream and downstream extents of each feature, and sample points were collected in the field using a 1:2,400 scale (1 inch = 200 feet) aerial photograph, topographic base, and GPS equipment with sub-meter accuracy. Dudek GIS technician Curtis Battle digitized the jurisdictional extents based on the GPS data and transect width measurements into a project-specific GIS using ArcGIS software.

3.2.5 Arborist Survey

Dudek's International Society of Arboriculture–certified arborist conducted an evaluation to document tree location and attribute information within the project footprint and along the project site's perimeter where canopies overhang the property line. Tree attribute data collected during the site evaluation included species, trunk diameter, tree height, canopy spread, general health condition, structural condition, and presence of observable pests or other tree maladies. Trunk diameters were measured using a diameter tape that provides adjusted figures for diameter measurements when wrapping the tape around a tree's circumference. Where access to trunks was infeasible (e.g., for off-site trees located behind fences), visual estimates of trunk diameter were made. Diameter measurements were made at 4.5 feet above grade, consistent with County Code Section 16.34.030.

Tree health and structure were evaluated with respect to five distinct tree components: roots, trunk, scaffold branches, small branches, and foliage. Each tree component was assessed with regard to health factors, such as insect, fungal, or pathogen damage; mechanical damage; presence of decay; presence of wilted or dead leaves; and wound closure. Components were graded as good, fair, poor, and dead, with "good" representing no apparent problems, and "dead" representing a dying or dead tree. The location of each individual tree was hand-mapped on a geo-referenced aerial photo base map.

Subsequent to the survey conducted on the proposed medical office building parcel, Dudek reviewed the proposed project's engineering and landscape drawings (dated October 31, 2018, and revised October 29, 2019) to identify trees located within the vicinity of the stormwater pipeline and outfall (Ifland 2020).

3.2.6 Survey Limitations

Surveys were conducted during multiple seasons, which resulted in detection and identification of perennial plant species that occur in the BSA. In addition, the focused botanical surveys were conducted during the appropriate bloom periods so that target special-status plant species would be evident and identifiable, if present. Limitations of the surveys also included a diurnal bias and the absence of trapping for small mammals, reptiles, and amphibians. The surveys were conducted during the daytime to maximize the detection of most wildlife. Most birds are active in the daytime, so diurnal surveys maximize the number of bird observations. Conversely, diurnal surveys usually result in few observations of mammals, many of which may only be active at night. In addition, many species of reptiles and amphibians are secretive in their habits and are difficult to observe using standard meandering transects.

The biological reconnaissance survey, vegetation mapping, California red-legged frog habitat assessment, and aquatic resources jurisdictional delineation were conducted from the existing easements and publicly accessible roads and rights-of-way, and access was not available for all parcels within a 1-mile buffer of the project site due to private residential properties that surround the BSA. Therefore, use of aerial imagery signatures for vegetation communities and habitat suitability adjacent to the project site were conducted for those areas that could not be accessed on foot.

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4 Results

4.1 Vegetation Communities and Land Covers

The BSA supports the following vegetation communities and land covers: disturbed annual grassland, coast live oak woodland along Rodeo Creek Gulch, and non-natural land cover or developed areas. Figure 3 illustrates the distribution of these land cover and vegetation types, and Table 2 summarizes the extent of vegetation communities and land covers within the BSA. Descriptions of these vegetation communities and land covers are summarized below.

Table 2. Vegetation Communities and Land Covers within the Biological Study Area

Vegetation Community or Land Cover	Area (acres)
Disturbed Annual Grassland	2.29
Coast Live Oak Woodland	5.66
Urban/Developed	36.89
Total	**44.84**

4.1.1 Distributed Annual Grassland

Disturbed annual grassland is limited to a narrow strip along the west side of Rodeo Creek Gulch. This vegetation community is composed of ruderal and non-native species, including bur clover (*Medicago polymorpha*), Harding grass (*Phalaris* sp.), perennial rye grass (*Festuca perennis*), soft brome (*Bromus hordeaceus*), wild oat (*Avena fatua*), wild radish (*Raphanus raphanistrum*), and a few other herbaceous species commonly found in heavily disturbed areas.

4.1.2 Coast Live Oak Woodland

The coast live oak woodland spans the width of the gently sloping grades along Rodeo Creek Gulch. This natural woodland community was characterized by a dense overstory of mature coast live oak (*Quercus agrifolia*) trees, with some arroyo willow (*Salix lasiolepis*) and California bay (*Umbellularia californica*). The understory consisted of a mix of shrubs, vines, and herbaceous species, including California blackberry (*Rubus ursinus*), curly doc (*Rumex crispus*), English ivy (*Hedera helix*), narrow-leaf plantain (*Plantago lanceolata*), and poison oak (*Toxicodendron diversilobum*).

4.1.3 Urban/Developed

The urban/developed areas support commercial, industrial, and/or institutional structures or land covers. Typically, these areas are paved with impermeable surfaces that cannot support vegetation or habitat for species; however, non-native ornamental landscaping may occur. The urban/developed land cover type also includes areas that lack vegetation, such as paved roads or unimproved areas that still retain a pervious surface.

Within the BSA, the urban/developed land cover type includes transportation routes, parking lots, and commercial land that supports very limited ornamental tree and shrub plantings along Soquel Avenue and the commercial parcels to the south.

4.2 Plants and Wildlife Observed

4.2.1 Plants

A total of 79 species of native or naturalized plants—30 native (38%) and 49 non-native (62%)—were recorded within the BSA. Plants detected on the medical office building parcel were scattered and composed of ruderal and ornamental plant species, including black acacia (*Acacia melanoxylon*), pampas grass (*Cortaderia selloana*), fennel (*Foeniculum vulgare*), Himalayan blackberry (*Rubus armeniacus*), and various non-native annual grasses and forbs commonly found in heavily disturbed areas. Plants detected along the stormwater pipeline alignments were associated with similar urban land covers, as well as disturbed annual grassland and riparian oak woodland vegetation communities. Plants detected within these vegetation communities are summarized above. A full list of plant species observed is provided in Appendix G, Plant Compendium.

4.2.2 Wildlife

Nine wildlife species, consisting of nine native species (100%) and no non-native species (0%), were recorded within the BSA during surveys. Wildlife species detected on or in the immediate vicinity of the BSA included the following: American crow (*Corvus brachyrhynchos*), Bewick's wren (*Thryomanes bewickii*), Botta's pocket gopher (*Thomomys bottae*), California ground squirrel (*Spermophilus* [*Otospermophilus*] *beecheyi*), California towhee (*Melozone crissalis*), mourning dove (*Zenaida macroura*), Pacific-slope flycatcher (*Empidonax difficilis*), spotted towhee (*Pipilo maculatus*), and yellow-rumped warbler (*Setophaga coronata*). The BSA also provides habitat for other common, urban-adapted wildlife species such as fox squirrel (*Sciurus niger*), northern raccoon (*Procyon lotor*), and striped skunk (*Mephitis mephitis*). A full list of wildlife species by taxonomic group observed is provided in Appendix H, Wildlife Compendium.

4.3 Special-Status Biological Resources

Appendix I, Special-Status Plants Potentially Occurring within the BSA, and Appendix J, Special-Status Wildlife Potentially Occurring within the BSA, provide tables of all special-status species whose geographic ranges fall within the general BSA vicinity. Special-status species potential to occur within the BSA were evaluated based on known species distribution, species-specific habitat preferences, and Dudek biologists' knowledge of regional biological resources. Species potentially occurring within the BSA are identified as having moderate or high potential to occur based on habitat conditions on site, and species for which there is little or no suitable habitat are identified as not expected to occur or having low potential to occur.

4.3.1 Special-Status Plants

Special-status plants include those listed, or candidates for listing, as threatened or endangered by the USFWS and CDFW, and species identified as rare by the CNPS (particularly CRPR 1A, presumed extinct in California; CRPR 1B, rare, threatened, or endangered throughout its range; and CRPR 2, rare or endangered in California, more common elsewhere).

Dudek biologists performed an extensive desktop review of literature, existing documentation, and GIS data to evaluate the potential for special-status plant species to occur within the BSA. Each special-status plant species

was assigned a rating of "not expected," "low," "moderate," or "high" potential to occur based on relative location to known occurrences, vegetation community, soil, and elevation. Based on the results of the literature review and database searches, 50 special-status plant species were identified as potentially occurring within the region of the BSA. Of these, two species were initially determined to have a moderate potential to occur within the BSA based on the soils, vegetation communities (habitat) present, elevation range, and previous known locations based on the CNDDB, IPaC, and CNPS Inventory. The species initially identified for potential occurrence were Santa Cruz tarplant (*Holocarpha macradenia*; federally threatened, state endangered, and CNPS CRPR 1B.1) and white-rayed pentachaeta (*Pentachaeta bellidiflora*; federally endangered, state endangered, and CNPS CRPR 1B.1). These species are described below.

Focused special-status plant surveys were conducted on May 22 and June 20, 2019, by Dudek botanist Lasthenia Michele Lee. The timing of the surveys coincided with the blooming period for all target species during at least one survey pass. No special-status plant species were identified within the BSA during the surveys. The remaining special-status plant species were evaluated and determined to have little to no potential to occur within the BSA. Appendix I lists the 50 special-status plant species identified as occurring within the BSA and their potential to occur rating and reasoning.

Additionally, there is no USFWS-designated critical habitat for listed plant species within the BSA (USFWS 2020a) or within 10 miles of the BSA.

4.3.1.1 Santa Cruz Tarplant

Santa Cruz tarplant is a federally threatened and state endangered species that is endemic to California. Santa Cruz tarplant is an annual herb (blooms June through October) in the Asteraceae family that inhabits coastal prairies, coastal scrub, and valley and foothill grasslands in the Santa Cruz region. Habitat often includes clay or sandy soils at elevations from sea level to approximately 700 hundred feet above sea level. Santa Cruz tarplant is known to occur in the Rodeo Creek corridor, north of Soquel Avenue approximately 0.24 miles from the BSA.

4.3.1.2 White-Rayed Pentachaeta

White-rayed pentachaeta is a federally and state endangered species that is endemic to California. White-rayed pentachaeta is an annual herb (blooms March through May) in the Asteraceae family that inhabits cismontane woodland and valley and foothill grasslands, often in locations with serpentine soils. Its current known distribution is restricted to San Mateo County. There are no CNDDB occurrences of this species within 5 miles of the project site (CDFW 2020b).

4.3.2 Special-Status Wildlife

Special-status wildlife include those listed, or candidates for listing, as threatened or endangered by the USFWS and CDFW, and designated as species of special concern by the CDFW and sensitive by the USFWS.

Similar to special-status plants, Dudek biologists performed an extensive desktop review of literature, existing documentation, and GIS data to evaluate the potential for special-status wildlife species to occur within the BSA. Each special-status wildlife species was assigned a rating of "not expected," "low," "moderate," or "high" potential to occur based on relative location to known occurrences and vegetation community/habitat association. Based on the results of the literature review and database searches, 36 special-status wildlife species were reported in the CNDDB and USFWS databases as occurring in the vicinity of the BSA. Of these, three wildlife species were

determined to have a moderate potential to occur within the BSA based on habitat present and previous known locations based on the CNDDB and IPaC records: western pond turtle (*Actinemys marmorata*), pallid bat (*Antrozous pallidus*), and Townsend's big-eared bat (*Corynorhinus townsendii*). Three other special-status wildlife species were initially investigated due to historic records, County interest, and/or mapped habitat within the vicinity of the BSA: California red-legged frog; tidewater goby (*Eucyclogobius newberryi*); and anadromous fishes, including steelhead (*Oncorhynchus mykiss irideus*) and coho salmon (*Oncorhynchus kisutch*). These species are discussed further below. The remaining special-status species were evaluated and determined to have little to no potential to occur within the BSA. Table 3 includes the special-status wildlife species with a moderate potential to occur rating. Appendix J lists the 36 special-status wildlife species identified as occurring within the BSA and their potential to occur rating and reasoning.

Additionally, there is no USFWS-designated critical habitat for listed wildlife species within the BSA (USFWS 2020a) or within 10 miles of the BSA.

Table 3. Special-Status Wildlife Species with a Moderate to High Potential to Occur within the Biological Study Area

Scientific Name	Common Name	Federal/State	Status within Biological Study Area
Mammals			
Actinemys marmorata	western pond turtle	None/SSC	Moderate
Antrozous pallidus	pallid bat	None/SSC	Moderate
Corynorhinus townsendii	Townsend's big-eared bat	None/SSC	Moderate

Source: CDFW 2019a
State Status
SSC: California Species of Special Concern

4.3.2.1 Western Pond Turtle

Western pond turtle, a State Species of Special Concern, uses both aquatic and terrestrial habitats. It is found in rivers, lakes, streams, ponds, wetlands, ephemeral creeks, reservoirs, agricultural ditches, estuaries, and brackish waters. Adults tend to favor deeper, slow-moving water, whereas hatchlings search for slow and shallow water that is slightly warmer. Terrestrial habitats are used for wintering and usually consist of burrows in leaves and soil. Western pond turtle nesting typically occurs from March through July, depending on local conditions (Zeiner et. al. 1988–1990. There are no reported observations of western pond turtle in the Rodeo Creek Gulch; however, potentially suitable habitat exists in the culvert pool below Soquel Avenue, and may occur in other locations throughout the gulch and into Corcoran Lagoon. Although some locations with suitable aquatic habitat may occur, the presence of dense riparian vegetation and woodland overstory limits the suitability of the habitat by decreasing the availability of sunny basking sites within the gulch.

4.3.2.2 Pallid Bat

Pallid bat, a State Species of Special Concern, is present in a variety of habitat types throughout California, except within the highest elevations of the Sierra Nevada. Pallid bat uses rocky outcrops, cliffs, crevices in buildings and bridges, and occasionally in hollow trees within which to breed and roost. The species is most common in open, dry habitats with rocky areas for roosting, and is highly sensitive to disturbance at or near roost sites (Zeiner et. al.

1988–1990). Although Rodeo Creek Gulch could serve as potential foraging habitat, there is low potential for roosting/breeding due to the general lack of suitable roost habitat.

4.3.2.3 Townsend's Big-Eared Bat

Townsend's big-eared bat, a State Species of Special Concern, is also found throughout California except in the highest elevations of the Sierra Nevada. It typically prefers roosting in human-made structures, such as mines, tunnels, and buildings that provide cave-like habitat conditions (Zeiner et. al. 1988–1990). Similar to pallid bat, this species is highly sensitive to disturbance and could potentially use Rodeo Creek Gulch as foraging habitat; however, there is low potential for roosting/breeding due to the general lack of suitable roost habitat.

4.3.2.4 Other Listed Species Considered

California Red-Legged Frog

California red-legged frog is a federally threatened species and a state Species of Special Concern (CDFW 2019a). The species historically occurred from the Marin County coast, and inland from Shasta County, south to Baja California, but currently has limited distribution in central coastal California. California red-legged frog generally inhabits lowland streams, wetlands, riparian woodland, and livestock ponds. It requires dense, shrubby, or emergent vegetation associated with deep, still, or slow-moving water (CDFW 2020b).

Based on the results of an initial biological constraints assessment for the proposed stormwater pipeline alignment (Appendix C), a focused habitat assessment for California red-legged frog was conducted following the most recent USFWS guidance (USFWS 2005). The literature and database review identified the nearest occurrences for the species as approximately 4.57 miles north of the project site (CDFW 2019a). In addition, the BSA is not included in designated California red-legged frog Critical Habitat for Santa Cruz County (Mori 2019).

The field assessment characterized the BSA and surrounding area as largely industrial/commercial and high-density residential. Potential aquatic breeding habitat was limited to one small pool at the downstream end of the Soquel Avenue culvert. The pool appeared to be less than 1 foot in depth and was dark and slightly turbid with no presence of aquatic invertebrates or fish. Although this pool may be perennial and is present at the downstream end of the culvert beneath Soquel Avenue in the vicinity of the potential storm drain outflow, the pool lacks cover and vegetation for egg deposition, is located in the main channel where winter flows could dislodge egg masses, and is located in a highly urbanized environment (Mori 2019). The remaining reach of Rodeo Creek Gulch within the BSA was dry during the November 2019 site assessment. Given these circumstances, the pool seems marginal as breeding habitat, at best. Also, when considering the absence of perennial off-channel ponds and wetlands, habitats typically considered suitable California red-legged frog breeding sites, within the 1-mile radius of the project site, the BSA is unlikely to provide dispersal habitat for juveniles or non-breeding habitat for adults, with no potential source populations nearby (Mori 2019). The habitat assessment concluded that the BSA provides low potential for breeding and dispersal habitat for California red-legged frog, and additional USFWS-protocol surveys for the species were not warranted.

Tidewater Goby

Tidewater goby is a federal and state endangered fish that inhabits brackish water in lagoons, estuaries, and salt marshes. Although tidewater goby's current range includes much of California, and it has a historic range from Del Norte County to San Diego County, many historically occupied locations have been extirpated as a result of drought,

increased predation, and drainage and water quality changes. Tidewater goby is able to move into slack freshwater habitats upstream from lagoons, but all life stages are typically found in brackish water lagoons and coastal wetland habitats. Tidewater goby is known to occur in the Corcoran Lagoon at the outflow of Rodeo Creek Gulch, which is approximately 0.54 miles south of the BSA. The most recent occurrence of the species is from 1996 when more than 100 individuals (including more than 50 juveniles) were detected within brackish waters (with little freshwater inflow) from the lagoon mouth to approximately 1 mile upstream (CDFW 2020b).

Tidewater goby is not expected to occur in Rodeo Creek Gulch within the BSA due to unsuitable habitat conditions. The creek is characterized by dry reaches that were observed during multiple surveys. Low flows and dry reaches would prevent tidewater goby from accessing the BSA from suitable habitat in Corcoran Lagoon. During storm events, Rodeo Creek Gulch would also be unsuitable for tidewater goby, with high flows that are able to breach the lagoon during major events. Additionally, local surface water diversions are a known threat to the species, and natural barriers to fish movement occur within Rodeo Creek Gulch. In addition, the BSA is relatively far upstream from suitable brackish water habitat in Corcoran Lagoon, and has high levels of human disturbance (homeless camps) that likely decrease water quality and potential for sensitive fish species to occupy that portion of Rodeo Creek Gulch. In addition, the BSA is not included within USFWS-designated Critical Habitat for the species.

Steelhead and Coho Salmon

The federally and state endangered central California coast Evolutionarily Significant Unit of coho salmon (*Oncorhynchus kisutch* pop. 4) occurs in streams of the north coast. The federally threatened central California coast Distinct Population Segment of steelhead (*Oncorhynchus mykiss irideus* pop. 8) also occurs in streams along the coast of Santa Cruz County. Neither of these species is reported to occur in Rodeo Creek Gulch or the Corcoran lagoon in the CNDDB; however, the Friends of Corcoran Lagoon Beach organization mentions steelhead on its website in discussion of artificially breaching the lagoon (FOCLB 2020). When the sand beach is breached into the Corcoran Lagoon, it would be possible for coho or steelhead to enter the lagoon, and subsequently Rodeo Gulch Creek. Coho salmon are very rare in the Santa Cruz area, and it is highly unlikely that any coho would ascend into marginal or unsuitable habitat within Rodeo Creek Gulch. No suitable spawning habitat for either coho or steelhead is present in the BSA, and dry reaches or low flows likely limit access to the BSA during most flow conditions. If steelhead were able to access the upper portions of Rodeo Creek Gulch, overwintering, spawning, outmigration, and juvenile rearing would likely be precluded by unsuitable habitat conditions. So, although the Corcoran Lagoon could provide potential juvenile rearing habitat for anadromous salmonids, it is unlikely that any other life stages could be supported in Rodeo Creek Gulch, and it is considered unlikely that either of these species occurs within the BSA. In addition, the BSA is not included within USFWS-designated Critical Habitat for either of these species.

4.3.3 Jurisdictional Wetlands and Waters

An aquatic resources delineation was conducted on May 22, 2019 (Appendix E). The delineation focused on the stormwater pipeline and outfall structure located in the eastern portion of the BSA. The BSA occurs within the Aptos-Soquel Subarea (403.13) of the Santa Cruz Hydrologic Area (403.10), which occurs within the larger Big Basin Hydrologic Unit (Central Coast RWQCB 2019). Hydrology within the BSA has been influenced by anthropogenic sources, including the Highway 1 and Soquel Avenue, and adjacent residential and commercial developments. Sources of hydrology within the BSA include Rodeo Creek Gulch, precipitation, and runoff from the adjacent mountain slopes and impervious surfaces such as roadways and parking lots.

4.3.3.1 Rodeo Creek Gulch

The BSA supports the riparian canopy of one intermittent drainage (Rodeo Creek Gulch) and one adjacent federal wetland. Rodeo Creek Gulch is a natural drainage that supports intermittent flows and originates near Rodeo Creek Gulch Road in the Santa Cruz Mountains. The mainstem and active channel of the drainage (including the OHWM) occurs just east of the BSA. However, the western portion of the riparian canopy and an adjacent wetland occur within the BSA and were the focus of the jurisdictional delineation. The CDFW and RWQCB jurisdictional width encompassed the lateral extent of the oak woodland canopy within the BSA and ranged from 10 to 385 feet. The western bank of Rodeo Creek Gulch within the BSA supported an active streambed terrace that contained a seasonally ponded, adjacent wetland. Hydrophytic plant species dominated the perimeter of the ponded area, and the feature was determined to meet the USACE three-parameter test for classification as a federal wetland (Appendix E). A total of 2.82 acres of USACE jurisdictional wetlands and 7.61 acres of CDFW and RWQCB jurisdictional streambed and associated riparian habitat would be considered state wetlands (Table 5, Appendix E). USACE jurisdiction overlaps and is a subset of the CDFW acreage. Figure 4 illustrates the location and extent of jurisdictional aquatic resources, and Table 4 summarizes the amount of jurisdiction calculated within the BSA. A more detailed description of the aquatic resources is provided in the delineation report (Appendix E).

Table 4. Summary of Jurisdictional Aquatic Resources

Feature	Width (feet)		Area (acres)		Nature
	USACE	*RWQCB/CDFW*	*USACE*	*RWQCB/CDFW*	
Rodeo Gulch Creek*	26–130	10–385	2.82	7.61	Intermittent

USACE = U.S. Army Corps of Engineers; RWQCB = Regional Water Quality Control Board; CDFW = California Department of Fish and Wildlife
* Adjacent wetland is located within the Rodeo Creek Gulch system.

4.3.4 Wildlife Corridors/Habitat Linkages

Wildlife corridors are linear features that connect large patches of natural open space and provide avenues for the migration of animals. Wildlife corridors contribute to population viability by ensuring continual exchange of genes between populations, providing access to adjacent habitat areas for foraging and mating, and providing routes for recolonization of habitat after local extirpation or ecological catastrophes (e.g., fires).

Habitat linkages are small patches that join larger blocks of habitat and help reduce the adverse effects of habitat fragmentation. Habitat linkages provide a potential route for gene flow and long-term dispersal of plants and animals, and may also serve as primary habitat for smaller animals, such as reptiles and amphibians. Habitat linkages may be continuous habitat or discrete habitat islands that function as steppingstones for dispersal.

Rodeo Creek Gulch, between its headwaters and coastal terminus, may serve as a local movement corridor that connects habitat for certain birds; mammals; amphibians; reptiles; and, when flowing, fish species. Since the proposed project would not significantly alter habitat conditions in or around Rodeo Creek Gulch, and is designed to improve water quality within the creek, the proposed project is not expected to contribute to the impediment of local or seasonal movement of wildlife through the surrounding habitat.

4.3.5 Protected Trees

A Dudek arborist mapped the locations of all trees within the medical office building footprint and along the parcel's perimeter where canopies overhang the property line. A total of 29 trees were identified during the tree inventory, including eight on site and 21 off site, on or adjacent to the medical office building parcel's property line. Dominant tree species included London plantree (*Platanus acerifolia*), Arizona ash (*Fraxinus velutina*), Raywood ash (*Fraxinus angustifolia*), and blue gum (*Eucalyptus globulus*). Individual tree locations are presented in the Arborist Survey (Appendix B) (see Attachment A, Tree Location Exhibit), and individual tree data is presented in Attachment B, Tree Information Matrix, of Appendix B. Additionally, the Dudek arborist reviewed the proposed project's engineering and landscape drawings to identify trees located within the vicinity of the stormwater pipeline and outfall. Several mature and immature coast live oak trees occur adjacent to the outfall. However, only three trees located on the south-facing slope of Highway 1 would require removal: one approximately 4 inches in diameter, one approximately 8 inches in diameter, and one larger multi-trunk tree measuring greater than 10 inches in diameter (Ifland 2020).

None of the trees on the medical office building parcel or proposed stormwater pipeline alignment would be protected by County Code Section 16.34 because they occur outside of the Coastal Zone.

5 Project Impacts

This section addresses direct, indirect, and cumulative impacts to biological resources that would result from implementation of the proposed project. The significance determinations for proposed or potential impacts are described in Section 6.

- **Direct impacts** refer to complete loss of a biological resource. For purposes of this report, it refers to the area where vegetation clearing, grubbing, or grading replaces biological resources. Direct impacts were quantified by overlaying the proposed impact limits on the biological resources map of the BSA. Direct impacts would occur from maintenance activities.
- **Indirect impacts** are reasonably foreseeable effects caused by project implementation on remaining or adjacent biological resources outside the direct disturbance zone. Indirect impacts may affect areas outside the disturbance zone, including open space and areas within the BSA. Indirect impacts may be short-term and construction-related, or long-term and associated with development in proximity to biological resources.
- **Cumulative impacts** refer to the combined environmental effects of the proposed project and other relevant projects.

The evaluation of proposed project impacts using the thresholds of significance presented above is organized by the resource potentially affected: special-status species, riparian and sensitive vegetation communities (special-status vegetation communities), jurisdictional waters and wetlands, and wildlife movement.

Analysis of the proposed project focuses on permanent and temporary construction-related impacts resulting from construction of the medical office building, parking garage, and stormwater pipeline and outfall structure (Figure 5, Project Impacts). The medical office building, parking garage, and stormwater pipeline would be located within previously disturbed and developed land covers. The reconstructed outfall structure would be located within a small portion of the oak woodland edge (upland) associated with Rodeo Creek Gulch. The bulk of temporary impacts during construction would be limited to the use of the existing public roads and rights-of-way.

The existing drainage system south of Soquel Avenue that ultimately discharges to Rodeo Gulch, approximately 2,000 feet south of the road, is a haphazard collection of shallow swales and undersized culverts that results in minor flooding along portions of the flow path through private properties. A drainage study commissioned by the County in 2008 showed that directing runoff from the previously re-zoned project property, coupled with intercepting existing runoff coming under Highway 1 from areas north of the highway, would reduce flooding potential through the aforementioned private properties while maintaining the discharge of runoff to Rodeo Creek Gulch, as occurs currently. Preventing flooding and capturing stormwater in an appropriately sized conveyance system will decrease water quality degradation that is currently occurring when flood conditions exist and surface water picks up chemicals, debris, and sediments from sources along Soquel Avenue.

The following impacts will be analyzed in relation to the project site. This report assumes that direct impacts will generally occur within the temporary and permanent impact footprints within the project site, and indirect, temporary impacts will generally occur within the surrounding 300-foot buffer BSA. Figure 5, Project Impacts, shows the general location of direct impact areas that would occur to biological resources within the project site.

5.1 Impacts to Special-Status Species

5.1.1 Special-Status Plants

The BSA was initially determined to have a moderate potential to support two special-status plant species: Santa Cruz tarplant and white-rayed pentachaeta. However, these species were not observed within the BSA during the biological reconnaissance or focused botanical surveys, thereby significantly reducing the potential for these species to occur on the project site, despite the presence of suitable habitat. Additionally, the proposed project would not occur within federally designated critical habitat for special-status plant species.

5.1.1.1 Direct Impacts

No direct impacts to special-status plant species would occur as a result of the proposed project.

5.1.1.2 Indirect Impacts

No indirect impacts to special-status plant species would occur as a result of the proposed project.

5.1.2 Special-Status Wildlife

The project site and surrounding BSA provide moderate potential to support three special-status wildlife species: western pond turtle, pallid bat, and Townsend's big-eared bat. None of these species have been observed during any of the surveys conducted for the project. Additionally, other listed species initially considered (California red-legged frog, tidewater goby, and steelehead and coho salmon) are not expected to occur within the BSA.

5.1.2.1 Direct Impacts

The majority of proposed construction activities resulting in permanent or temporary direct impacts would be located within developed areas, but a small portion of the storm drain and outfall structure would result in ground disturbance underneath the oak woodland vegetation community. Construction of the storm drain and outfall could result in temporary disturbance to bat foraging habitat, although construction would likely occur outside of prime bat foraging times periods. Additionally, the native trees and shrubs within the BSA provide suitable nesting habitat for bird species protected under the MBTA and CFGC Section 3500. Trimming, pruning, and/or removal of trees and native shrubs may occur as a result of construction of the project. Therefore, there may be potential for a significant direct impact to nesting birds, particularly during the general nesting season of February 1 through August 31.

5.1.2.2 Indirect Impacts

Short-term and long-term indirect impacts to special-status wildlife species (including fish downstream of the BSA) associated with project construction would not likely result in significant impacts. Preventing flooding and capturing stormwater in an appropriately sized conveyance system would decrease water quality degradation that is currently occurring when flood conditions exist and surface water picks up chemicals, debris, and sediments from sources along Soquel Avenue. Construction-related dust, soil erosion, and water runoff could indirectly impact any potentially occurring special-status species within Rodeo Creek Gulch within or downstream of the BSA. Standard construction BMPs, including construction-related minimization measures to control dust, erosion, and runoff (e.g.,

straw bales and silt fencing), would be implemented to minimize potential adverse impacts. In addition, noise generated by construction activities, including vegetation removal and grading, during the avian breeding season (February 1 through August 31) could result in indirect impacts to nesting birds. Noise related to these activities has the potential to disrupt reproductive and feeding activities. Under the MBTA and CFGC, indirect impacts to individual special-status and native birds, active nests, and/or the young of nesting special-status and native bird species would be significant, absent mitigation.

5.2 Impacts to Sensitive Vegetation Communities

The project site and surrounding area are primarily characterized by a disturbed/developed land cover. The proposed project would replace all land covers on the project site to grade and construct the various buildings and use areas proposed by the project. This would result in the removal of several ruderal and ornamental shrubs and trees at the proposed medical office building location. Portions of the oak woodland vegetation associated with Rodeo Creek Gulch in the eastern portion of the BSA may also be directly impacted through habitat modification and/or trimming during removal and construction of a new stormwater pipeline outfall. The oak woodland vegetation community is considered a sensitive natural community on the California Natural Communities List (CDFW 2019b).

5.2.1 Direct Impacts

The proposed project would involve construction of a new four-story medical office building and garage; utility and drainage improvements, including a new 8-inch-diameter sanitary sewer, 8-inch-diameter fire, and 4-inch-diameter domestic water lines; and installation of a new storm drain extending from APN 029-021-47 along Soquel Avenue and terminating on the south-facing, manufactured slope of Highway 1 next to Rodeo Creek Gulch. A 48-inch-diameter, reinforced concrete pipe culvert would be installed under westbound Soquel Avenue and daylight south of the road. The storm drain outfall design would consist of a concrete headwall with flared ends and a rock riprap apron.

Installation of the proposed storm drain would result in ground disturbance from trenching activities primarily to the disturbed land cover (Soquel Avenue). However, a small portion of the storm drain and outfall structure would result in ground disturbance underneath the oak woodland vegetation community within the utilities right-of-way. Direct temporary and permanent impacts would result from reconstruction of the outfall's headwall and rock riprap apron.

The oak woodland vegetation community associated with Rodeo Creek Gulch within the most eastern portion of the BSA is a riparian habitat type and is considered sensitive due to its limited distribution and high potential to support threatened and endangered plant and wildlife species. Oak woodlands are not afforded legal protection unless they support special-status plant or wildlife species.

Table 5 depicts the acreage of direct impacts to the oak woodland vegetation community anticipated as a result of project implementation.

Table 5. Impacts to Vegetation Communities and Land Covers within the Biological Study Area

Vegetation Community or Land Cover	Permanent Impacts (acres)	Temporary Impacts (acres)
Forest and Woodland Alliances and Stands		
Coast Live Oak Woodland	0.01	0.05

5.2.2 Indirect Impacts

During construction activities, indirect edge effects to sensitive vegetation communities (coast live oak woodland) may include dust, which could disrupt plant vitality in the short term, or construction-related soil erosion and water runoff. In the absence of BMPs; construction-related minimization measures to control dust, erosion, and runoff; and compliance with National Pollutant Discharge Elimination System requirements, indirect impacts to on-site riparian resources and upland communities could occur. However, standard construction BMPs to control dust, erosion, and runoff, including straw bales and silt fencing, would be implemented to minimize these adverse effects.

5.3 Impacts to Jurisdictional Wetlands and Waters

The BSA supports the riparian canopy of one intermittent drainage (Rodeo Creek Gulch), which includes one adjacent federal wetland to the mainstem of Rodeo Creek Gulch. The BSA (which includes a 300-foot buffer around the project site) contains 2.82 acres of USACE jurisdictional wetlands and 7.61 acres of CDFW and RWQCB jurisdictional streambed and associated riparian habitat, all of which would be considered state wetlands.

5.3.1 Direct Impacts

Ground disturbance underneath the oak woodland vegetation community would result from the replacement of a small portion of the stormwater pipeline outfall structure. A total of 0.01 acres of permanent impacts and 0.05 acres of temporary impacts would occur to RWQCB and CDFW non-wetland waters of the state. Permanent and temporary impacts associated with construction of the storm drain outflow would occur in areas considered jurisdictional streambed and associated riparian habitat. Table 6 summarizes the extent of impacts to jurisdictional aquatic resources within the BSA.

Table 6. Impacts to Jurisdictional Aquatic Resources within the Biological Study Area

Vegetation Community or Land Cover	Permanent Impacts (acres)	Temporary Impacts (acres)
Regional Water Quality Control Board Non-Wetland Waters/California Department of Fish and Wildlife		
Coast Live Oak Woodland	0.01	0.05

5.3.2 Indirect Impacts

Indirect impacts to jurisdictional aquatic resources could result from adverse indirect edge effects. Indirect edge effects are defined as side effects of a project that do not directly impact habitat, vegetation communities, species, or water quality, but might have an effect on the long-term vitality of these resources if left unmanaged. During construction activities, edge effects may include construction-related soil erosion and water runoff. Potential long-term indirect impacts on jurisdictional waters within the project site could result from increased human presence and trash/pollution. However, with implementation of standard construction BMPs, including water quality BMPs, no short-term or long-term indirect impacts to jurisdictional waters would occur.

5.4 Impacts to Wildlife Corridor/Habitat Linkages

5.4.1 Direct Impacts

The proposed project is not proposing to significantly alter the vegetation communities or physical setting of Rodeo Creek Gulch. Although a small area within the coast live oak woodland would be permanently impacted due to the stormwater outfall replacement, this small displacement of habitat would not impact wildlife movement within the BSA or surrounding areas. Following project implementation, the function and values of the oak woodland and Rodeo Creek Gulch are expected to remain the same.

5.4.2 Indirect Impacts

There would be no long-term indirect impacts to wildlife movement as a result of the proposed project. Some short-term indirect impacts to localized wildlife movement could occur due to construction-related noise and work in the vicinity of Rodeo Creek Gulch. However, these impacts would be temporary and would not be expected to significantly disrupt wildlife movement due to ambient noise conditions and the ability for wildlife to continue to move through the creek and upland portions of the BSA during and after construction. Work activities are not currently proposed during the nighttime. Additionally, due to the current existing uses on the site and the amount of human presence, the conditions and uses surrounding Rodeo Creek Gulch post-construction would either be consistent with or improved from existing uses, particularly by providing water quality benefits downstream during storm events.

5.5 Impacts Related to Local Policies and Ordinances

Potential impacts resulting from implementation of the proposed project were analyzed for compliance with the Santa Cruz County General Plan and LCP implementing ordinances. Based on the discussion presented in Section 2.3.1, County of Santa Cruz General Plan and Local Coastal Program, the impact analysis below focuses on the Riparian Corridor Protection Ordinance and Significant Tree Ordinance.

The County's Riparian Corridor Protection Ordinance prohibits development within riparian corridors and areas within a buffer zone as measured from the top of bank. The buffer zone extends from 50 feet from the edge of riparian woodland and 20 feet beyond the edge of other woody vegetation, as determined by the dripline. The proposed stormwater drain project component would occur within the protected buffer zone of Rodeo Creek Gulch.

However, the proposed project qualifies as a riparian exception considering the unique circumstances of its design, function, and net benefit to natural resources, as follows:

- It is necessary for the proper design and function of an existing facility.
- It will not be detrimental to the public welfare or injurious to other property downstream or in the area in which the project is located.
- It will not reduce or adversely impact the riparian corridor, and there is no feasible, less-environmentally damaging alternative.
- It is in accordance with the purpose of the County's ordinance, the objectives of the General Plan, and the Local Coastal Program Land Use Plan.

Therefore, the proposed project is considered a riparian exception according to the provisions of Santa Cruz County Code Chapter 16.30 and would not be subject to the provisions from Santa Cruz County Code Chapter 16.32, Sensitive Habitats Protection Ordinance.

The BSA supports several mature trees that require removal during grading and construction of buildings, driveways, and the placement of necessary infrastructure. Although the proposed landscape areas may allow for retention of some trees in the southern portion of the project site, five trees at the medical office building parcel and two trees at the stormwater pipeline outfall would be removed. Trees proposed for removal consist of two Bailey acacia (*Acacia baileyana*) trees (approximately 10 to 17 inches in diameter) and three Raywood ash (*Fraxinus angustifolia*) trees (approximately 6 to 7 inches in diameter) at the medical office building parcel, and two coast live oak trees (one approximately 4 inches in diameter and one approximately 8 inches in diameter) located on the south-facing slope of Soquel Avenue. However, the BSA occurs outside of the Coastal Zone, and removal of these trees would not require a tree removal permit.

5.6 Impacts to Habitat Conservation Plans

The project site does not occur within any approved Habitat Conservation Plan area or within other biological resources protected by regional resource planning efforts. Therefore, no impacts to any conservation planning efforts would occur with implementation of the proposed project.

5.7 Cumulative Impacts

Cumulative biological impacts due to the proposed project, in combination with other past, current, and future development projects, could adversely impact biological resources in the region. There is one nearby pending cumulative development project within the vicinity of the proposed project based on a list provided by the Santa Cruz County Planning Department. That project is a proposed residential development north of Highway 1 and along Rodeo Gulch, which could result in potential direct or indirect impacts to sensitive habitat and special-status species. However, cumulative projects would have to mitigate for impacts to sensitive biological resources and comply with the same regulatory requirements. Therefore, the proposed project would not contribute to long-term cumulative impacts to biological resources.

6 Significant Impacts and Mitigation

6.1 Explanation of Findings of Significance

Impacts to special-status vegetation communities; plant and wildlife species; and jurisdictional waters, including wetlands, must be quantified and analyzed to determine whether such impacts are significant under CEQA. CEQA Guidelines Section 15064(b) states that an ironclad definition of "significant" effect is not possible, because the significance of an activity may vary with the setting. Appendix G of the CEQA Guidelines, however, does provide "examples of consequences which may be deemed to be a significant effect on the environment" (14 CCR 15064[e]). These effects include substantial effects on rare or endangered species of animal or plant or the habitat of the species. CEQA Guidelines Section 15065(a) is also helpful in defining whether a project may have a significant effect on the environment. Under that section, a proposed project may have a significant effect on the environment if the project has the potential to (1) substantially degrade the quality of the environment, (2) substantially reduce the habitat of a fish or wildlife species, (3) cause a fish or wildlife population to drop below self-sustaining levels, (4) threaten to eliminate a plant or animal community, (5) reduce the number or restrict the range of a rare or endangered plant or animal, or (6) eliminate important examples of a major period of California history or prehistory.

The following are the significance thresholds for biological resources provided in the CEQA Guidelines Appendix G Environmental Checklist, which states that a project would potentially have a significant effect if it:

- Impact BIO-1. Has a substantial adverse effect, either directly or through habitat modifications, on any species identified as being a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS.
- Impact BIO-2. Has a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by CDFW or USFWS.
- Impact BIO-3. Has a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- Impact BIO-4. Interferes substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impedes the use of native wildlife nursery sites.
- Impact BIO-5. Conflicts with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- Impact BIO-6. Conflicts with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.

The evaluation of whether or not an impact to a particular biological resource is significant must consider both the resource itself and the role of that resource in a regional context. Substantial impacts are those that contribute to, or result in, permanent loss of an important resource, such as a population of a rare plant or wildlife species. Impacts may be important locally, because they result in an adverse alteration of existing site conditions, but considered not significant because they do not contribute substantially to the permanent loss of that resource regionally. The severity of an impact is the primary determinant of whether or not that impact can be mitigated to a level below significance.

The following significance determinations were made based on the impacts of the proposed project.

6.2 Impact BIO-1: Special-Status Species

6.2.1 Special-Status Plants

Two special-status plant species (Santa Cruz tarplant and white-rayed pentachaeta) were determined to have a moderate potential to occur within the BSA. However, neither of these species, nor any other special-status plants, were observed during general and focused botanical surveys conducted in May and June 2019. Therefore, the project site is currently considered absent of any special-status plant species, and there would be no significant impacts to special-status plant species as a result of project implementation.

6.2.2 Special-Status Wildlife

Potential direct permanent and temporary impacts resulting from grading activities to establish temporary access and construction work areas, as well as replacement of the stormwater outfall structure, could result in significant impacts to special-status wildlife species.

Western Pond Turtle. Construction-related activities could have a substantial adverse effect on this species, if present. A total of 0.12 acres of temporary impacts and 0.01 acres of permanent impacts to potential habitat for this species would be impacted during construction-related ground disturbance.

Nesting Birds and Roosting Bats. Potential direct temporary and permanent impacts resulting from grading activities could occur to nesting birds and roosting bats, including pallid bat and Townsend's big-eared bat. The BSA contains suitable nesting habitat for ground- and tree-nesting bird species and roosting bats, particularly within the riparian areas associated with Rodeo Creek Gulch and the undeveloped lands surrounding the project site. Construction-related activities that occur within the general nesting season (February through August) could result in a substantial adverse effect to nesting birds. Construction activities that could result in direct impacts to nesting birds and roosting bats include vegetation and tree removal during grading activities. Indirect impacts to nesting birds and roosting bats that could occur during construction include an increase in human activity, and construction noise and dust in the immediate vicinity of an active nest that could result in significant harassment and nest abandonment, causing loss of the nest. Therefore, the impact of the proposed project on nesting birds and roosting bats would be potentially significant.

Other Special-Status Species. California red-legged frog was determined to have low potential to occur within the BSA, and focused, protocol-level surveys within the project site were not warranted for this species. As a result, impacts to California red-legged frog are not anticipated with implementation of the proposed project. Additionally, impacts to special-status fish species that could occur downstream of the BSA, including tidewater goby and steelhead, would be avoided through implementation of standard BMPs.

Implementation of Mitigation Measure (**MM) BIO-1**, **MM BIO-2**, and **MM BIO-3**, and execution of the various standard construction BMPs would reduce potentially significant direct and indirect impacts to special-status wildlife species, if identified, to less than significant.

MM BIO-1 **Conduct Worker Environmental Awareness Training.** A qualified biologist shall conduct an education program for all persons employed on the project prior to performing work activities. The presentation given by the qualified biologist shall include a discussion of the biology and general behavior of any special-status species that may be in the area, how they may be encountered within

the work area, and procedures to follow when they are encountered. The qualified biologist shall prepare and distribute handouts containing all of this information for workers to carry on site. Interpretation shall be provided for non-English-speaking workers. All personnel working on the site shall receive this training and shall sign a sign-in sheet showing they received the training. Any personnel joining the work crew later shall receive the same training before beginning work.

MM BIO-2 **Conduct Pre-Construction Survey.** A pre-construction survey for western pond turtle and bat species shall be conducted within 48 hours prior to the onset of construction activities. The survey area shall include all suitable habitat within a 50-foot buffer of the project site. Suitable habitat for these species within the project site and buffer consist of the seasonally ponded, floodplain terrace associated with Rodeo Creek Gulch, the coast live oak woodlands, and any abandoned structures for the bat species. A pre-construction sweep for the species within the 50-foot work area buffer shall be conducted, and if any individuals of western pond turtle or bat roosting locations are observed during the pre-construction survey, their location(s) shall be recorded and identified for avoidance. Individuals found shall be allowed to move out of the area on their own. If avoidance is not feasible, qualified biologists shall consult with the California Department of Fish and Wildlife to determine appropriate avoidance, possibly including handling/translocating individuals of these species.

MM BIO-3 **Nesting Bird and Roosting Bat Avoidance**. Construction and tree removal activities shall avoid the migratory bird nesting season (typically February 1 through August 31) to reduce any potentially significant impact to birds that may be nesting in the biological study area. If construction and tree removal activities must occur during the migratory bird nesting season, an avian nesting survey of the project site and contiguous habitat within 300 feet of all impact areas must be conducted for protected migratory birds and active nests. The avian nesting survey shall be performed by a qualified wildlife biologist within 7 days prior to the start of ground or vegetation disturbance, and every 14 days during construction activities. If an active bird nest is found, the nest shall be flagged and mapped on the construction plans, along with an appropriate no disturbance buffer, which shall be determined by the biologist based on the species' sensitivity to disturbance (typically 250 feet for passerines and 500 feet for raptors and special-status species). The nest area shall be avoided until the nest is vacated and the juveniles have fledged. The nest area shall be demarcated in the field with flagging and stakes or construction fencing.

To the extent practicable, tree removal shall occur outside peak bat activity timeframes when young or overwintering bats may be present, which generally occurs from March through April and August through October, to ensure protection of potentially occurring bats and their roosts on the project site. Additionally, the timing of construction activities shall be limited to daylight hours to reduce disturbance to roosting (and foraging) bat species. Additionally, a visual bat survey shall be conducted within 30 days of the removal of any trees. The survey shall include a determination on whether active bat roosts are present on or within 50 feet of the project site. If a non-breeding and non-wintering bat colony is found, the individuals shall be evicted under the direction of a qualified biologist to ensure their protection and to avoid unnecessary harm. If a maternity colony or overwintering colony is found in the control building or trees on the project site, then the qualified biologist shall establish a suitable construction-free buffer around the location. The construction-free buffer shall remain in place until the qualified biologist determines that the nursery is no longer active.

6.3 Impact BIO-2: Sensitive Vegetation Communities

The oak woodland vegetation community associated with Rodeo Creek Gulch within the most eastern portion of the BSA is a riparian habitat type and is considered sensitive due to its limited distribution and potential to support special-status wildlife species. Direct temporary and permanent impacts to the coast live oak woodland would result from grading activities to establish temporary access and construction work areas around the stormwater pipeline outfall structure. These impacts would occur to the perimeter of this vegetation community, which is characterized by an oak canopy and understory dominated by ruderal and non-native species associated with the adjacent disturbed annual grassland vegetation community. A total of 0.01 acres of permanent impacts and 0.05 acres of temporary impacts to this natural vegetation community could result from project implementation. These project-related impacts would be considered significant.

Potential indirect impacts to the oak woodland vegetation community would be limited to short-term construction-related impacts due to erosion, runoff, and dust. Standard BMPs would be implemented during construction to address these potential indirect impacts.

Potentially significant impacts to sensitive vegetation communities would be mitigated to less than significant through implementation of **MM BIO-4**.

MM BIO-4 **Oak Woodland Revegetation.** Direct impacts to the oak woodland community shall be mitigated through on-site rehabilitation to conditions similar to those that existed prior to grading and/or ground-disturbing activities. This shall consist of re-contouring impacted areas to match pre-project grade, and a one-time revegetation effort followed by periodic monitoring and non-native weed removal for direct impacts to the oak woodland vegetation community. A conceptual Habitat Mitigation and Monitoring Plan shall be prepared and implemented that includes the enhancement activities, which may include non-native species removal and revegetation followed by monitoring for all disturbed areas. The plan shall specify the criteria and standards by which the enhancement actions will compensate for impacts of the proposed project on the oak woodland vegetation community, and shall, at a minimum, include discussion of the following: (1) the enhancement objectives, including the type and amount of revegetation to be implemented, taking into account enhanced areas where non-native invasive vegetation is removed, and replanting specifications that take into account natural regeneration of species; (2) the specific methods to be employed for revegetation; (3) success criteria and monitoring requirements to ensure vegetation community restoration success; and (4) remedial measures to be implemented in the event that performance standards are not achieved.

6.4 Impact BIO-3: Jurisdictional Wetlands

No significant direct permanent impacts would occur to state or federally defined wetlands as a result of project activities. However, implementation of the proposed project could have potentially significant direct, permanent and temporary impacts to non-wetland waters (riparian oak woodland vegetation community) under the jurisdiction of the RWQCB and CDFW. A total of 0.01 acres of permanent impacts to jurisdictional waters of the state would result from the construction and placement of a new stormwater pipeline outfall structure under the riparian oak woodland canopy. A total of 0.05 acres of temporary impacts to jurisdictional waters of the state would result from

construction equipment access to install the outfall structure under the riparian oak woodland. Direct impacts to jurisdictional non-wetland waters would be considered significant absent mitigation.

Short-term and long-term indirect impacts to jurisdictional waters of the state relating to construction activities (edge effects) and trash/pollution would not likely result in significant impacts, especially with the application of the standard BMPs that would be implemented during proposed project construction.

Permanently and temporarily impacted areas would be re-contoured and returned to pre-project grade, and non-native species would be removed and monitored within impacted areas. Potentially significant impacts to jurisdictional non-wetland waters of the state would be mitigated to less than significant through implementation of **MM BIO-5**. Mitigation for impacts to jurisdictional waters of the state (riparian oak woodland) are the measures taken to address impacts to special-status species and sensitive vegetation communities (as identified above in **MM BIO-1** through **MM BIO-4**).

MM BIO-5 **Compensate for Impacts to Jurisdictional Non-Wetland Waters of the State.** Direct temporary and permanent impacts to jurisdictional non-wetland waters of the state shall be mitigated on site. On-site measures shall overlap with the oak woodland revegetation required by MM BIO-4, which includes revegetation of riparian oak woodland areas within jurisdictional limits at a minimum 1:1 mitigation ratio. Acquisition of regulatory permits from the Regional Water Quality Control Board (under the Porter-Cologne Water Quality Act) and the California Department of Fish and Wildlife (under Section 1602 of the California Fish and Game Code) shall be required.

6.5 Impact BIO-4: Wildlife Corridors and Migratory Routes

No significant direct permanent impacts would occur on wildlife movement or use of native wildlife nursery sites associated with project activities. Existing habitat linkages and wildlife corridor functions would remain intact while construction activities are conducted and following completion. Construction activities would not likely result in impacts to wildlife movement because no new structures that would impede wildlife movement are proposed. Additionally, due to the current existing uses on the site and amount of human presence, the conditions and uses surrounding Rodeo Creek Gulch post-construction would either be consistent with or improved from existing uses, decreasing the potential for any minimal long-term indirect impacts.

During construction activities, temporary disturbance to local species may occur, but would not substantially degrade the quality or use of the oak woodland community. Following temporary construction disturbances, the function and values of Rodeo Creek Gulch are expected to remain the same and are anticipated to improve downstream following project construction. Although a small area along the slope of Soquel Avenue would be permanently impacted due to the stormwater outfall structure replacement, this small displacement of habitat would not impact wildlife movement or use of native wildlife nursery sites within the project site or surrounding areas.

Some indirect impacts to localized wildlife movement could occur during construction activities due to constructions-related noise. However, this impact would be temporary and would not be expected to significantly disrupt wildlife movement during and following construction activities. The environmental conditions and uses surrounding Rodeo Creek Gulch post-construction would remain and actually improve for species as a result of the

project's design. These factors would also reduce the potential for any long-term indirect impacts to wildlife movement as a result of the proposed project.

Therefore, direct and indirect impacts on wildlife corridors and migratory routes resulting from the proposed project would be less than significant.

6.6 Impact BIO-5: Local Policies or Ordinances

Potentially significant impacts resulting from implementation of the proposed project were analyzed for compliance with the County's General Plan and LCP. The project site occurs within the protected buffer zone of Rodeo Creek Gulch. However, the proposed project qualifies as a riparian exception considering the unique circumstances of its design, function, and net benefit to natural resources according to the provisions of Santa Cruz County Code Chapter 16.30, and would not be subject to the provisions from Santa Cruz County Code Chapter 16.32, Sensitive Habitats Protection Ordinance. Additionally, although implementation of the proposed project would result in the removal of trees during grading and construction of the medical office building, parking garage, and storm drain outfall, the BSA is located outside of the Coastal Zone, and therefore acquisition of a tree removal permit for protected trees is not necessary. As a result, the proposed project would not conflict with any local policies or ordinances.

6.7 Impact BIO-6: Habitat Conservation Plans

The proposed project is not located within the plan area for any habitat conservation plans; natural community conservation plans; or other approved local, regional, or state habitat conservation plan; therefore, the proposed project would not be in conflict with any such plans, and there would be no significant impacts as a result of the project.

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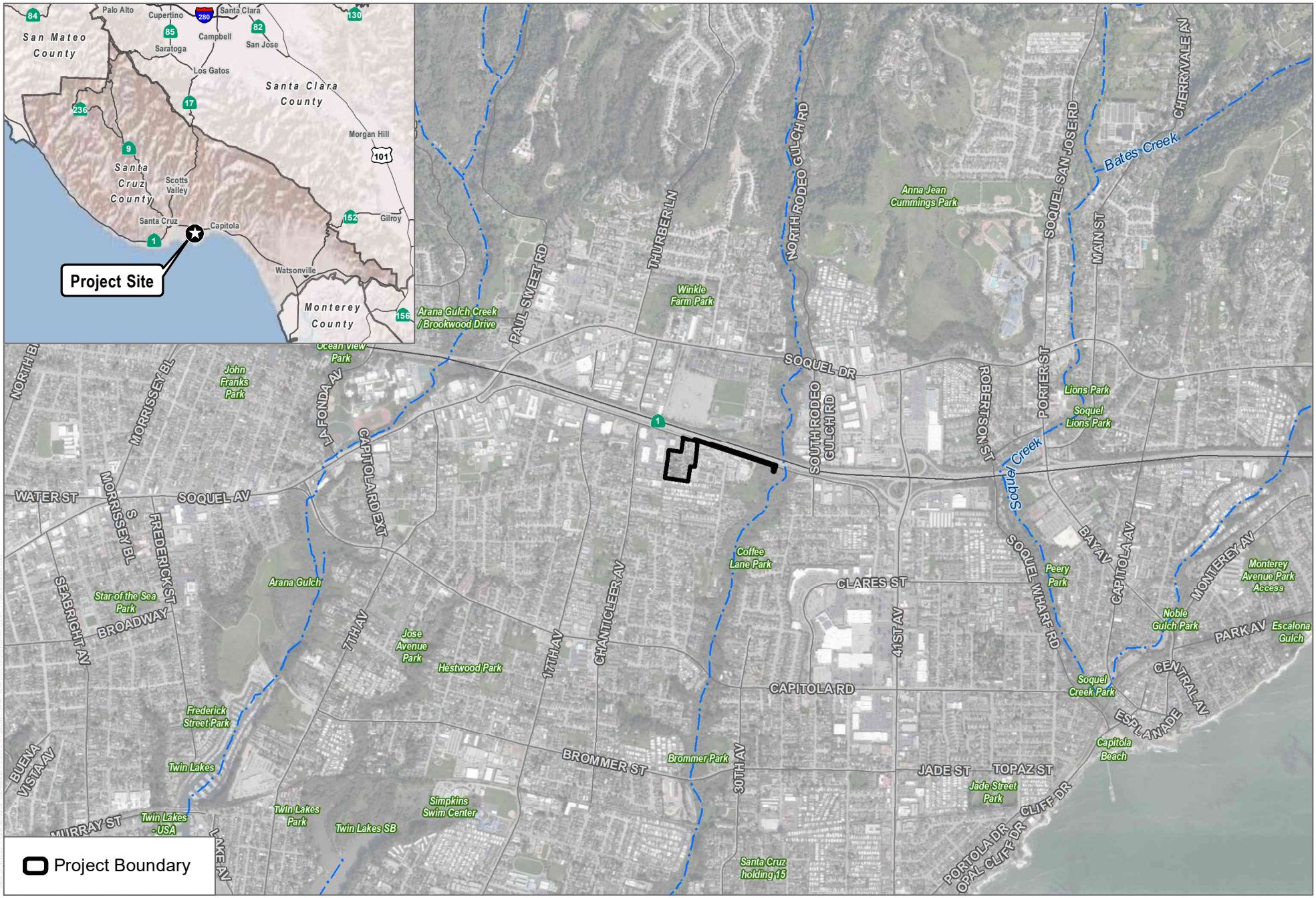

SOURCE: Bing 2020, NHD 2019

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FIGURE 1

Project Location

Santa Cruz Medical Office Building Project

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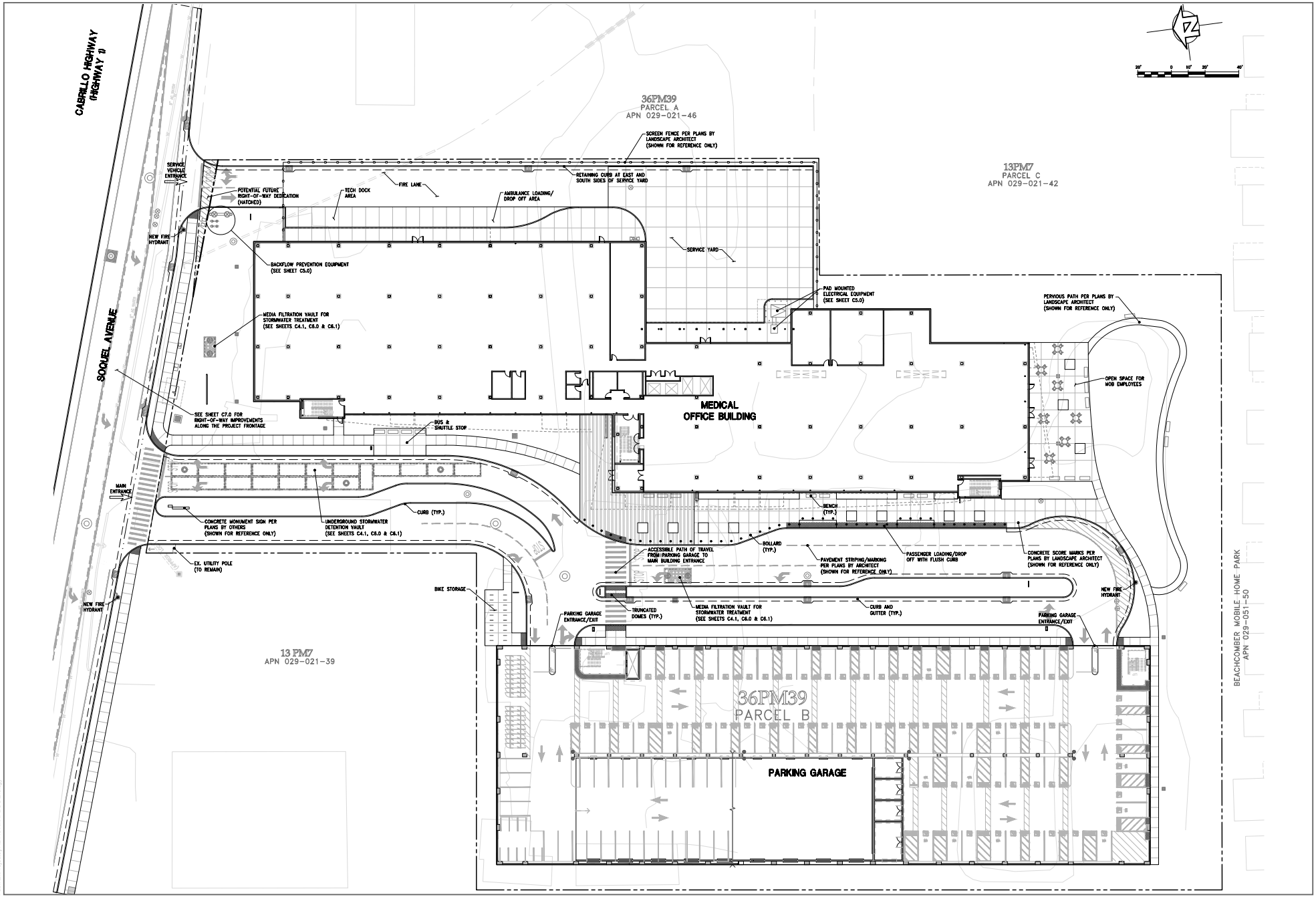

Sourece: Ifland Engineers 2019

FIGURE 2A

Site Plan

Santa Cruz Medical Office Building Project

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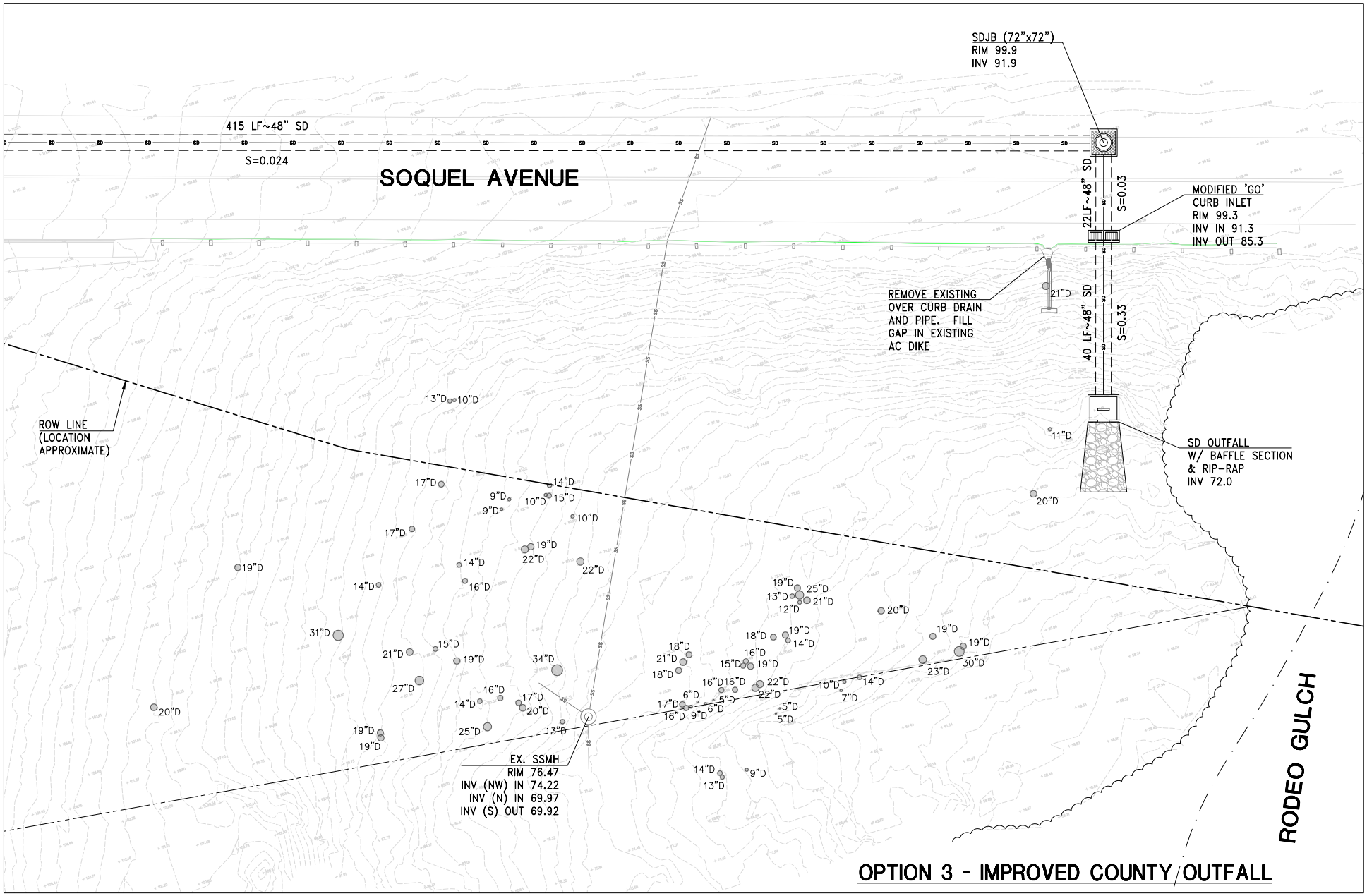

FIGURE 2B

Site Plan - Stormwater Drainage

Santa Cruz Medical Office Building Project

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SOURCE: Bing 2020, NHD 2019, Ifland Engineers 2019

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0 150 300 Feet

FIGURE 3

Vegetation Communities and Land Covers

Santa Cruz Medical Office Building Project

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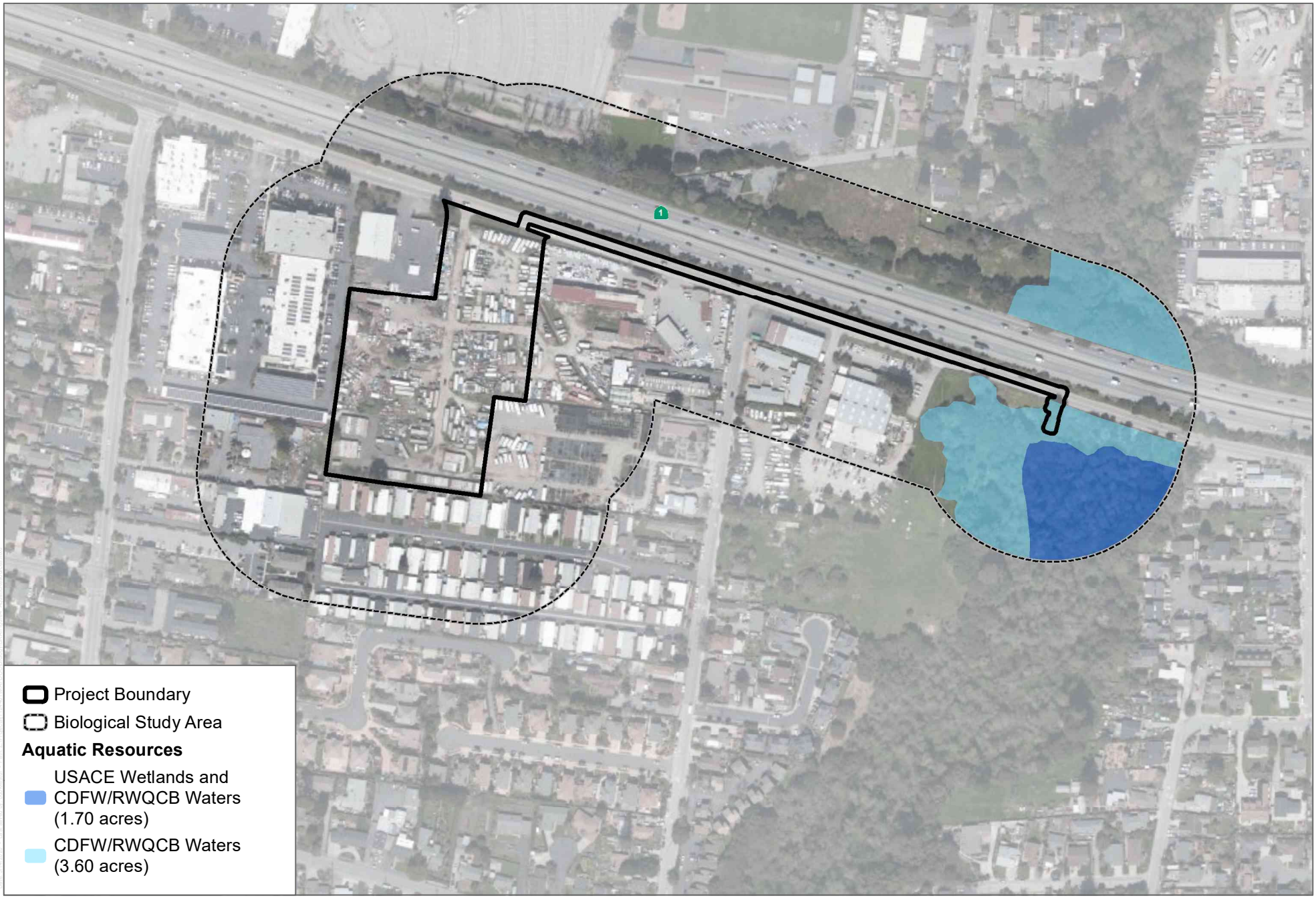

SOURCE: Bing 2020

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FIGURE 4

Aquatic Resources

Santa Cruz Medical Office Building Project

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SOURCE: Bing 2020, Ifland Engineers 2019

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FIGURE 5

Project Impacts

Santa Cruz Medical Office Building Project

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Appendix A

2018 Biological Resources Evaluation

DUDEK

725 FRONT STREET, SUITE 400
SANTA CRUZ, CALIFORNIA 95060
T 831.600.1400 F 831.600.1401

August 20, 2018 11244

Candice Bigley
Project Manager
PMB | Advancing Healthcare Real Estate
3394 Carmel Mountain Road, Suite 200
San Diego, CA 92121

Subject: Results of Reconnaissance-Level Biological Resources Evaluation for the Soquel Avenue Property (APN 029-021-47), Santa Cruz, California

Dear Ms. Bigley:

This report presents the results of a reconnaissance-level biological resources evaluation conducted by Dudek on the above-referenced property. The purpose of the survey was to identify and describe existing biological resources, evaluate the site's potential to support special-status plant and/or animal species, and determine if any other sensitive resources are present. This letter report includes the following: (1) a description of the methods used to conduct the evaluation; (2) a brief description of existing habitat conditions on the property; and (3) an analysis of special-status plant and animal species and other sensitive biological resources potentially present.

The property consists of an approximately 4.98-acre parcel located between Chanticleer Avenue and Mattison Lane in the City of Santa Cruz. The property is specifically located in Section 9 of Township 11 South, Range 1 West of the Soquel California 7.5-minute USGS quadrangle (see Figure 1).

Methods

Dudek searched the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB; CDFW 2018) and the U.S. Fish and Wildlife Service (USFWS) Inventory for Planning and Conservation (IPaC) database (USFWS 2018) for records of special-status species occurrences in the vicinity of the property. After reviewing the database results, Dudek biologist Lidia D'Amico visited the site on August 7, 2018, to assess current habitat conditions and evaluate the site's potential to support special-status plant and/or animal species and sensitive communities. For the purposes of this report, special-status species are defined as follows:

- Species that are listed, formally proposed, or designated as candidates for listing as threatened or endangered under the federal Endangered Species Act
- Species that are listed or designated as candidates for listing as rare, threatened, or endangered under the California Endangered Species Act
- Plant species assigned to California Rare Plant Ranks 1A, 1B, and 2
- Animal species designated as Species of Special Concern or Fully Protected by CDFW
- Species that meet the definition of rare, threatened, or endangered under Section 15380 of the California Environmental Quality Act guidelines
- Species that are considered to be a taxon of special concern by local agencies

The field survey also served to identify potential jurisdictional aquatic resources and other sensitive natural communities that occur on the project site. Jurisdictional aquatic resources include wetlands, streams, and creeks, among other aquatic features, that are subject to regulation under state and federal statutes and regulations. Sensitive natural communities are those communities (vegetation types) that are of limited distribution statewide or within a region and considered by CDFW to be a high priority for conservation based on their rarity and degree of threat.

Existing Conditions

The property consists of a highly disturbed and previously developed parcel in an urbanized setting. The surrounding area is substantially developed and is dominated by commercial land uses, streets, and parking lots. The property is characterized by a paved and graveled surface surrounded by chain-link fencing. The parcel is used for storage of vehicles, machinery, equipment, and other miscellaneous residential and landscaping items. Existing vegetation on the property is scattered and composed of ruderal and ornamental plant species including black acacia (*Acacia melanoxylon*), pampas grass (*Cortaderia selloana*), fennel (*Foeniculum vulgare*), Himalayan blackberry (*Rubus armeniacus*), and various non-native annual grasses and forbs commonly found in heavily disturbed areas.

Wildlife species detected on or in the immediate vicinity of the site included the following: mourning dove (*Zenaida macroura*), western gull (*Larus occidentalis*), California towhee (*Melozone crissalis*), black phoebe (*Sayornis nigricans*), and house finch (*Carpodacus mexicanus*). All of these species are generalists that are adapted to human-modified landscapes. The property also provides habitat for other urban-adapted wildlife species such as fox squirrel (*Sciurus niger*), northern raccoon (*Procyon lotor*), and striped skunk (*Mephitis mephitis*).

The site lacked drainage or other hydrological features and no hydrophytic plant species were observed during the site visit.

Results

Based on the results of the CNDDB and IPaC database searches (Appendix A) and observations during the site visit, 31 special-status species (11 plants and 20 animals) have the potential to occur in the vicinity of the property. However, due to the extent of disturbance/degraded habitat conditions on the property and its on-going use, the lack of suitable native habitats and substrates, and the highly developed/urbanized nature of the surrounding lands, the potential occurrence of special-status plant and animal species on or in the vicinity of the property is considered highly unlikely.

In addition, no sensitive natural communities or aquatic resources/features were identified during the field survey. No drainage features are present on the property and the property does not have any hydrologic connection to, or continuity with, other aquatic features in the vicinity of the site, such as Rodeo Creek Gulch.

Potential Biological Constraints & Recommendations

The only potential biological resources constraint to future development of the property is the potential presence of nesting birds. Nests of all native bird species are protected under the federal Migratory Bird Treaty Act (MBTA) and Section 3503 of the California Fish and Game Code, which prohibits the take, possession, or needless destruction of the nest or eggs of any bird. Existing trees and patches of vegetation (e.g., blackberry thickets, weed growth) provide nesting habitat for native bird species such as California towhee, song sparrow (*Melospiza melodia*), and house finch, among others. Native bird species adapted to the urban environment (e.g., black phoebe) may use human-made structures for nesting in lieu of natural features. Removal or trimming of trees and other vegetation during the nesting season (typically defined by CDFW as February 1 to August 31) could result in the destruction of active nests, including eggs, nestlings, or juveniles, and construction-related disturbance (e.g., equipment noise, presence of workers) could disrupt normal nesting behavior, resulting in nest abandonment and reproductive failure.

If conducted during the nesting season, vegetation removal could directly impact nesting birds by destroying active nests. Potential project impacts on nesting birds are typically avoided by conducting work outside of the nesting season. If project construction activities cannot be conducted outside of the nesting season, the following measures are recommended:

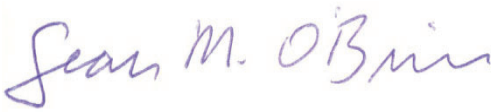
- Prior to any construction activities scheduled during the bird nesting season (February 1 to August 31), a preconstruction survey for nesting birds will be conducted by a qualified biologist. The survey will occur no more than 7 days prior to the initiation of ground-disturbing activities (including clearing, grubbing, and staging).
- If active nests are found during the survey, the biologist will establish exclusion zones around each nest in which no work will be allowed until the young have fledged or the nest is no longer active. The size of the exclusion zones will be based on the species' sensitivity to disturbance and planned work activities in the vicinity; typical buffer sizes are 250 feet for raptors and 50 feet for other birds.
- If a lapse in project-related activities of 15 days or longer occurs, another preconstruction survey will be conducted.
- Following the preconstruction survey, the biologist will prepare a memorandum summarizing the results of the survey effort and any recommendations to protect nesting birds.

Conclusions

In summary, the only potential biological resources constraint identified on the property is the potential occurrence of nesting birds. If project construction activities are scheduled during the nesting season, the recommendations described above will function to avoid impacts on nesting birds and ensure compliance with the MBTA and applicable provisions of the California Fish and Game Code.

Please contact me if you have any questions or require further information.

Sincerely,



Sean M. O'Brien
Principal/Senior Biologist
(510) 601-2517

Att.: Appendix A – CNDDB and IPaC Database Search Results

References

CDFW (California Department of Fish and Wildlife). 2018. California Natural Diversity Database (CNDDB), Commercial Version dated August 7, 2018. Biogeographic Data Branch, California Department of Fish and Wildlife, Sacramento.

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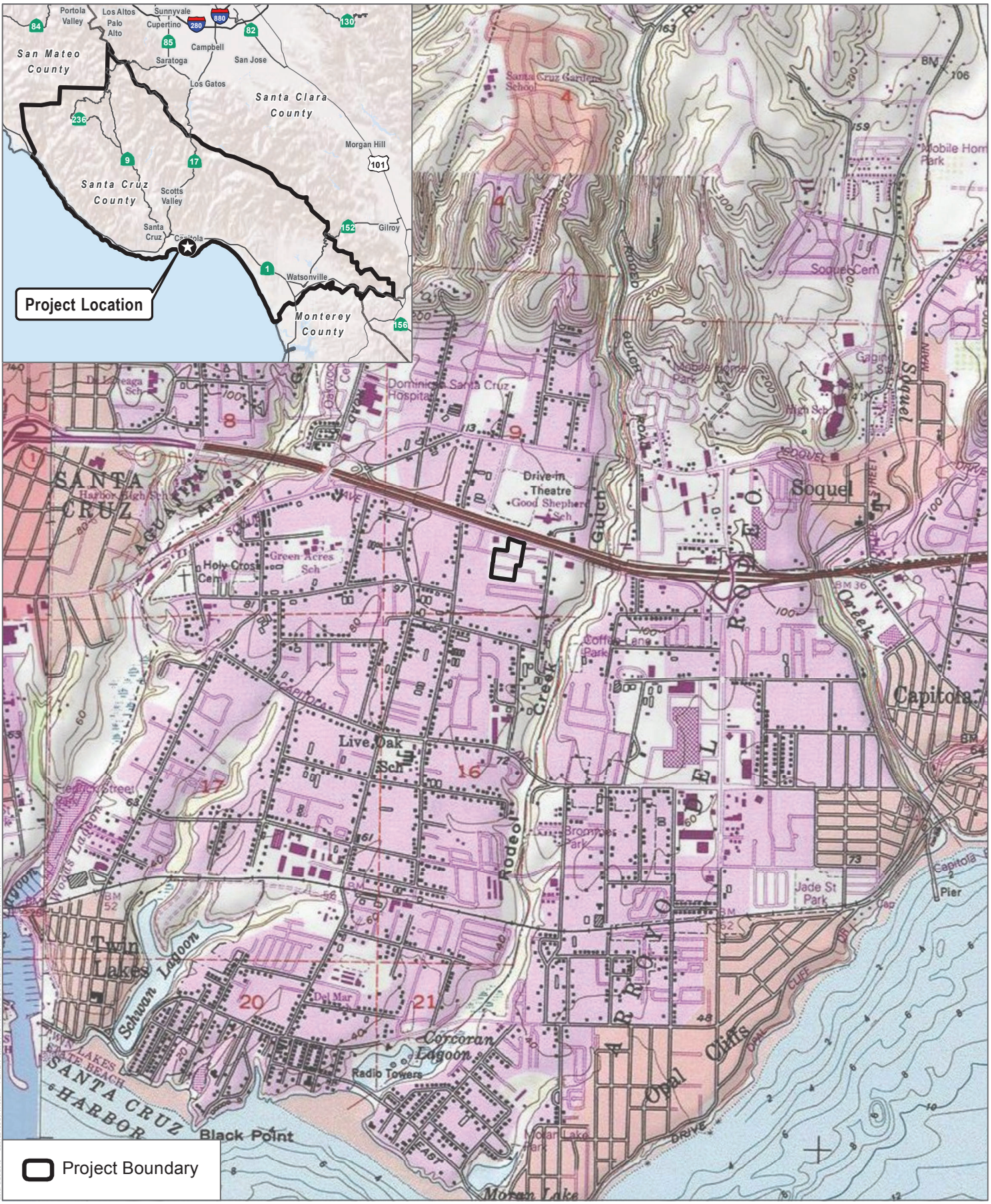

SOURCE: USGS Topo 7.5 Minute Series Soquel Quadrangle
Township 11S / Range 1W / Sections 09

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0 1,000 2,000 Feet
0 285 570 Meters
1:24,000

FIGURE 1

Project Location

Kaiser Medical Office Building and Rezone

APPENDIX A

CNDDB and IPaC Database Search Results

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Soquel (3612188))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Ambystoma macrodactylum croceum Santa Cruz long-toed salamander	AAAAA01082	Endangered	Endangered	G5T1T2	S1S2	FP
Antrozous pallidus pallid bat	AMACC10010	None	None	G5	S3	SSC
Arctostaphylos andersonii Anderson's manzanita	PDERI04030	None	None	G2	S2	1B.2
Bombus caliginosus obscure bumble bee	IIHYM24380	None	None	G4?	S1S2	
Bombus occidentalis western bumble bee	IIHYM24250	None	None	G2G3	S1	
Chorizanthe robusta var. robusta robust spineflower	PDPGN040Q2	Endangered	None	G2T1	S1	1B.1
Cicindela ohlone Ohlone tiger beetle	IICOL026L0	Endangered	None	G1	S1	
Corynorhinus townsendii Townsend's big-eared bat	AMACC08010	None	None	G3G4	S2	SSC
Coturnicops noveboracensis yellow rail	ABNME01010	None	None	G4	S1S2	SSC
Danaus plexippus pop. 1 monarch - California overwintering population	IILEPP2012	None	None	G4T2T3	S2S3	
Dicamptodon ensatus California giant salamander	AAAAH01020	None	None	G3	S2S3	SSC
Emys marmorata western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
Eucyclogobius newberryi tidewater goby	AFCQN04010	Endangered	None	G3	S3	SSC
Holocarpha macradenia Santa Cruz tarplant	PDAST4X020	Threatened	Endangered	G1	S1	1B.1
Lasthenia californica ssp. macrantha perennial goldfields	PDAST5L0C5	None	None	G3T2	S2	1B.2
Linderiella occidentalis California linderiella	ICBRA06010	None	None	G2G3	S2S3	
Monolopia gracilens woodland woollythreads	PDAST6G010	None	None	G3	S3	1B.2
Oncorhynchus mykiss irideus pop. 8 steelhead - central California coast DPS	AFCHA0209G	Threatened	None	G5T2T3Q	S2S3	
Pedicularis dudleyi Dudley's lousewort	PDSCR1K0D0	None	Rare	G2	S2	1B.2
Pentachaeta bellidiflora white-rayed pentachaeta	PDAST6X030	Endangered	Endangered	G1	S1	1B.1

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Rana boylii foothill yellow-legged frog	AAABH01050	None	Candidate Threatened	G3	S3	SSC
Thaleichthys pacificus eulachon	AFCHB04010	Threatened	None	G5	S3	
Trifolium buckwestiorum Santa Cruz clover	PDFAB402W0	None	None	G2	S2	1B.1
Trimerotropis infantilis Zayante band-winged grasshopper	IIORT36030	Endangered	None	G1	S1	
Tryonia imitator mimic tryonia (=California brackishwater snail)	IMGASJ7040	None	None	G2	S2	

Record Count: 25

IPaC resource list

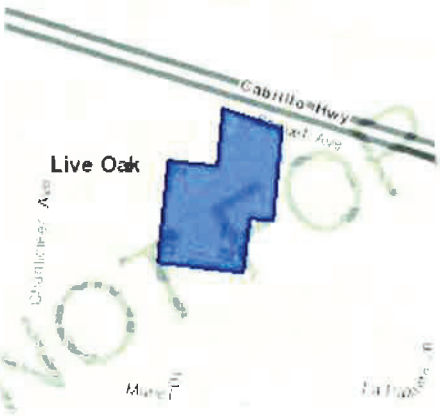
This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

NOT FOR CONSULTATION

Location

Santa Cruz County, California



Local office

Ventura Fish And Wildlife Office

(805) 644-1766
(805) 644-3958

2493 Portola Road, Suite B
Ventura, CA 93003-7726

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species

[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

NOT FOR CONSULTATION

Birds

NAME	STATUS
California Least Tern Sterna antillarum browni No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8104	Endangered
Least Bell's Vireo Vireo bellii pusillus There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/5945	Endangered
Marbled Murrelet Brachyramphus marmoratus There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/4467	Threatened
Southwestern Willow Flycatcher Empidonax traillii extimus There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/6749	Endangered
Western Snowy Plover Charadrius nivosus nivosus There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/8035	Threatened

Reptiles

NAME	STATUS
San Francisco Garter Snake Thamnophis sirtalis tetrataenia No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/5956	Endangered

Amphibians

NAME	STATUS
California Red-legged Frog Rana draytonii There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/2891	Threatened
California Tiger Salamander Ambystoma californiense There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/2076	Threatened

NOT FOR CONSULTATION

Santa Cruz Long-toed Salamander Ambystoma macrodactylum croceum — Endangered

There is **proposed** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/7405

Fishes

NAME	STATUS
Tidewater Goby Eucyclogobius newberryi	Endangered

There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/57

Insects

NAME	STATUS
Ohlone Tiger Beetle Cicindela ohlone	Endangered

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/8271

Zayante Band-winged Grasshopper Trimerotropis infantilis	Endangered

There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/1036

Flowering Plants

NAME	STATUS
Marsh Sandwort Arenaria paludicola	Endangered

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/2229

Santa Cruz Tarplant Holocarpha macradenia	Threatened

There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/6832

Scotts Valley Polygonum Polygonum hickmanii	Endangered

There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/3222

NOT FOR CONSULTATION

Scotts Valley Spineflower Chorizanthe robusta var. hartwegii Endangered

There is final critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/7108

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act

[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

FOR CONSULTATION

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
Allen's Hummingbird *Selasphorus sasin* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9637	Breeds Feb 1 to Jul 15
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31
Black Oystercatcher *Haematopus bachmani* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9591	Breeds Apr 15 to Oct 31
Black Skimmer *Rynchops niger* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/5234	Breeds May 20 to Sep 15
Black Swift *Cypseloides niger* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8878	Breeds Jun 15 to Sep 10
Black Turnstone *Arenaria melanocephala* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere

NOT FOR CONSULTATION

Burrowing Owl *Athene cunicularia* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9737	Breeds Mar 15 to Aug 31
California Thrasher *Toxostoma redivivum* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jan 1 to Jul 31
Clark's Grebe *Aechmophorus clarkii* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jan 1 to Dec 31
Common Yellowthroat *Geothlypis trichas sinuosa* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/2084	Breeds May 20 to Jul 31
Costa's Hummingbird *Calypte costae* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9470	Breeds Jan 15 to Jun 10
Golden Eagle *Aquila chrysaetos* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31
Lawrence's Goldfinch *Carduelis lawrencei* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9464	Breeds Mar 20 to Sep 20
Lewis's Woodpecker *Melanerpes lewis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9408	Breeds Apr 20 to Sep 30
Long-billed Curlew *Numenius americanus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/5511	Breeds elsewhere

NOT FOR CONSULTATION

Marbled Godwit *Limosa fedoa* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9481	Breeds elsewhere
Nuttall's Woodpecker *Picoides nuttallii* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9410	Breeds Apr 1 to Jul 20
Oak Titmouse *Baeolophus inornatus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9656	Breeds Mar 15 to Jul 15
Rufous Hummingbird *selasphorus rufus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8002	Breeds elsewhere
Short-billed Dowitcher *Limnodromus griseus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9480	Breeds elsewhere
Song Sparrow *Melospiza melodia* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Feb 20 to Sep 5
Spotted Towhee *Pipilo maculatus clementae* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/4243	Breeds Apr 15 to Jul 20
Tricolored Blackbird *Agelaius tricolor* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3910	Breeds Mar 15 to Aug 10
Whimbrel *Numenius phaeopus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9483	Breeds elsewhere
Willet *Tringa semipalmata* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere

NOT FOR CONSULTATION

Wrentit Chamaea fasciata — Breeds Mar 15 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (▪)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season ( )

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

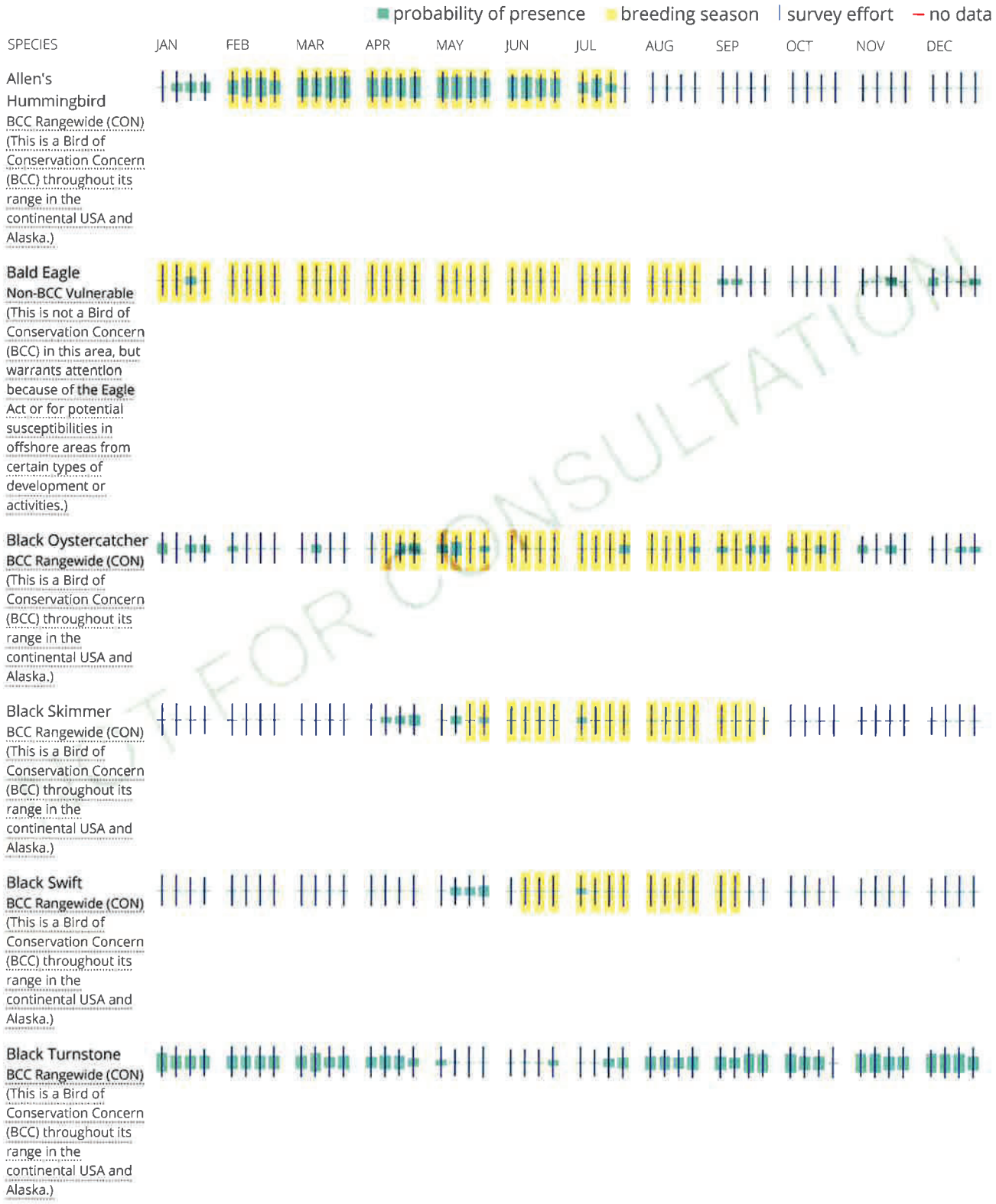
No Data (–)

A week is marked as having no data if there were no survey events for that week.

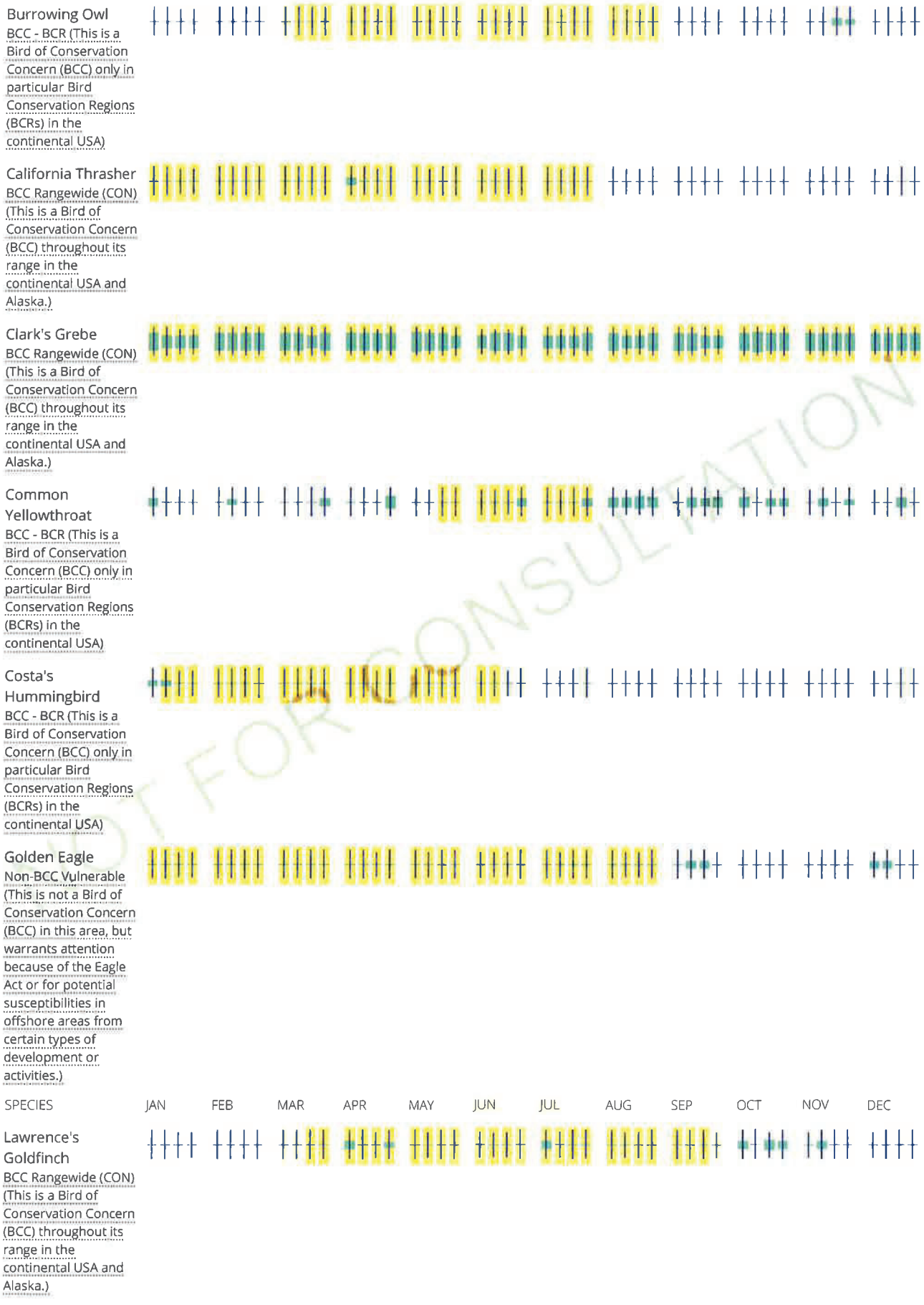
NOT FOR CONSULTATION

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



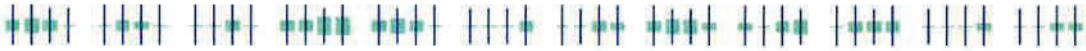
T FOR CONSULTATION



NOT FOR CONSULTATION

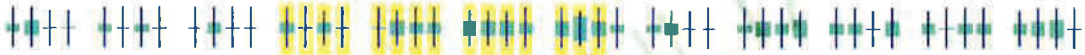
Lewis's Woodpecker
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Long-billed Curlew
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

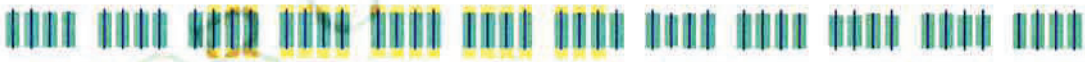


Marbled Godwit
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

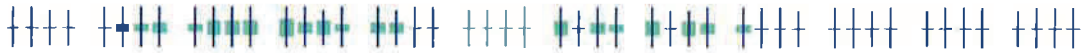
Nuttall's Woodpecker
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



Oak Titmouse
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

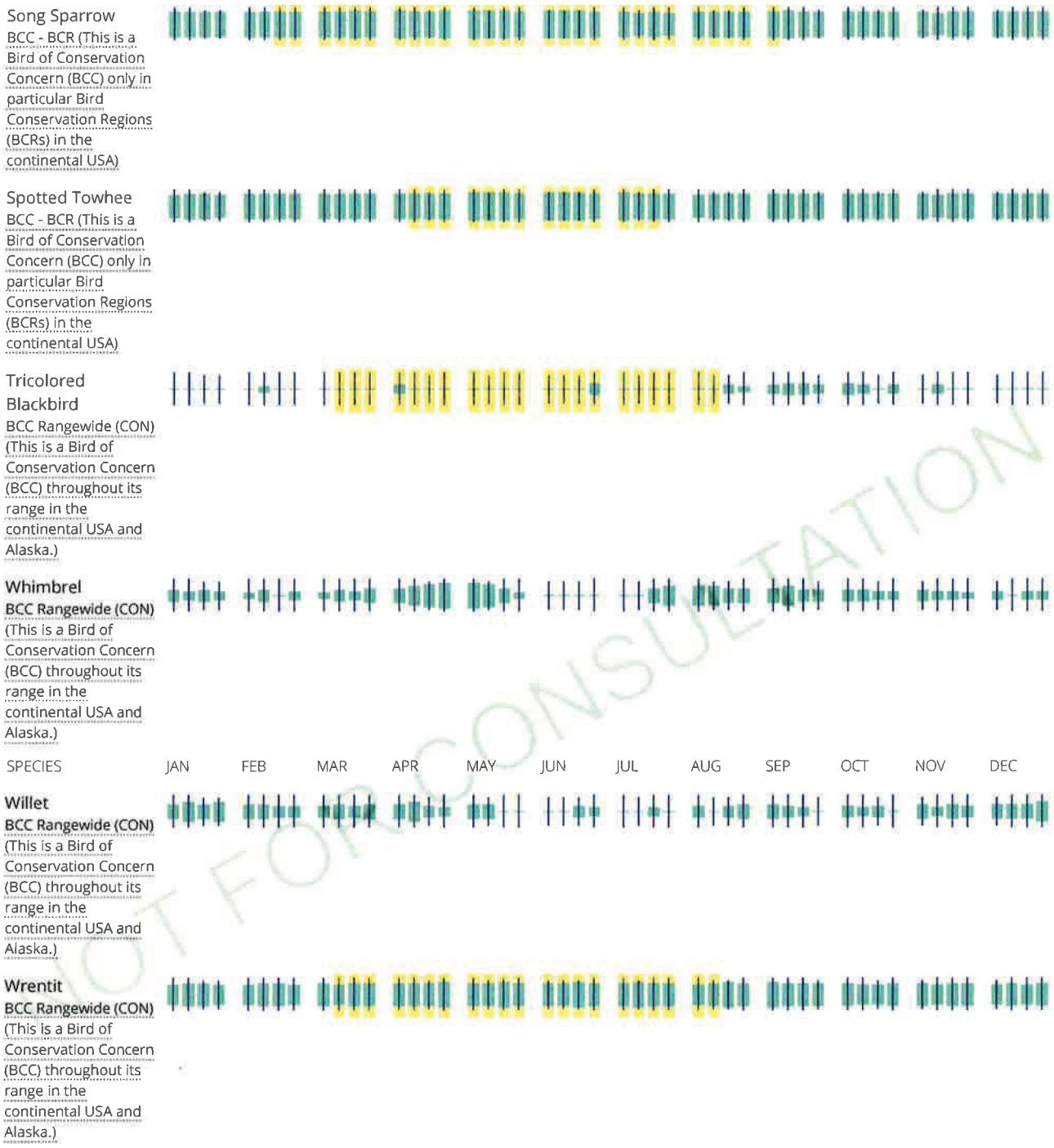


Rufous Hummingbird
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Short-billed Dowitcher
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

NOT FOR CONSULTATION



NOT FOR CONSULTATION

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the E-bird Explore Data Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review.

NOT FOR CONSULTATION

Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

NOT FOR CONSULTATION

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

THERE ARE NO KNOWN WETLANDS AT THIS LOCATION.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

NOT FOR CONSULTATION

Appendix B

2018 Arborist Survey

DUDEK

725 FRONT STREET, SUITE 400
SANTA CRUZ, CALIFORNIA 95060
T 831.600.1400 F 831.600.1401

October 22, 2018 11244

Candice Bigley
Project Manager
PMB | Advancing Healthcare Real Estate
3394 Carmel Mountain Road, Suite 200
San Diego, CA 92121

Subject: Arborist Report for the Soquel Avenue Property (APN 029-021-47), Santa Cruz, California

Dear Ms. Bigley:

This report summarizes Dudek's recent evaluation of trees within or directly adjacent to the subject property in unincorporated Santa Cruz County, California. This report includes a discussion of tree evaluation methods, a summary of findings, identification of anticipated impacts, and recommendations for tree protection during construction. The primary focus of our field effort was identification and inventory of all trees on or adjacent to the project site which may be affected by proposed development.

SUMMARY

A total of 29 trees were included in the tree inventory conducted in support of this letter report (8 on-site and 21 off-site but on or adjacent to property lines. The County of Santa Cruz regulates tree removal in the coastal zone (County Code Section 16.34); however, the property is located outside of the coastal zone. It is anticipated that five (5) on-site trees may require removal to accommodate site development. It is anticipated that the remaining 24 trees will not require removal. This report provides construction-related tree protection recommendations for on and off-site trees to be retained.

ASSIGNMENT

A Dudek International Society of Arboriculture (ISA) Certified Arborist performed the following key tasks:

- Assessed all trees with trunk diameters measuring 6-inches and greater and located on or adjacent to the property line for species, general health, general structural condition, size, and presence of pests. Off-site trees were included in the assessment if canopies extended over the property line or the trees may require pruning to accommodate construction.

- Confirmed tree impact status based on preliminary site development plans.
- Prepared a tree location exhibit.
- Prepared a tree information matrix that details individual tree attributes.
- Developed a letter report documenting site observations and providing tree protection recommendations.

PROJECT SETTING

Location

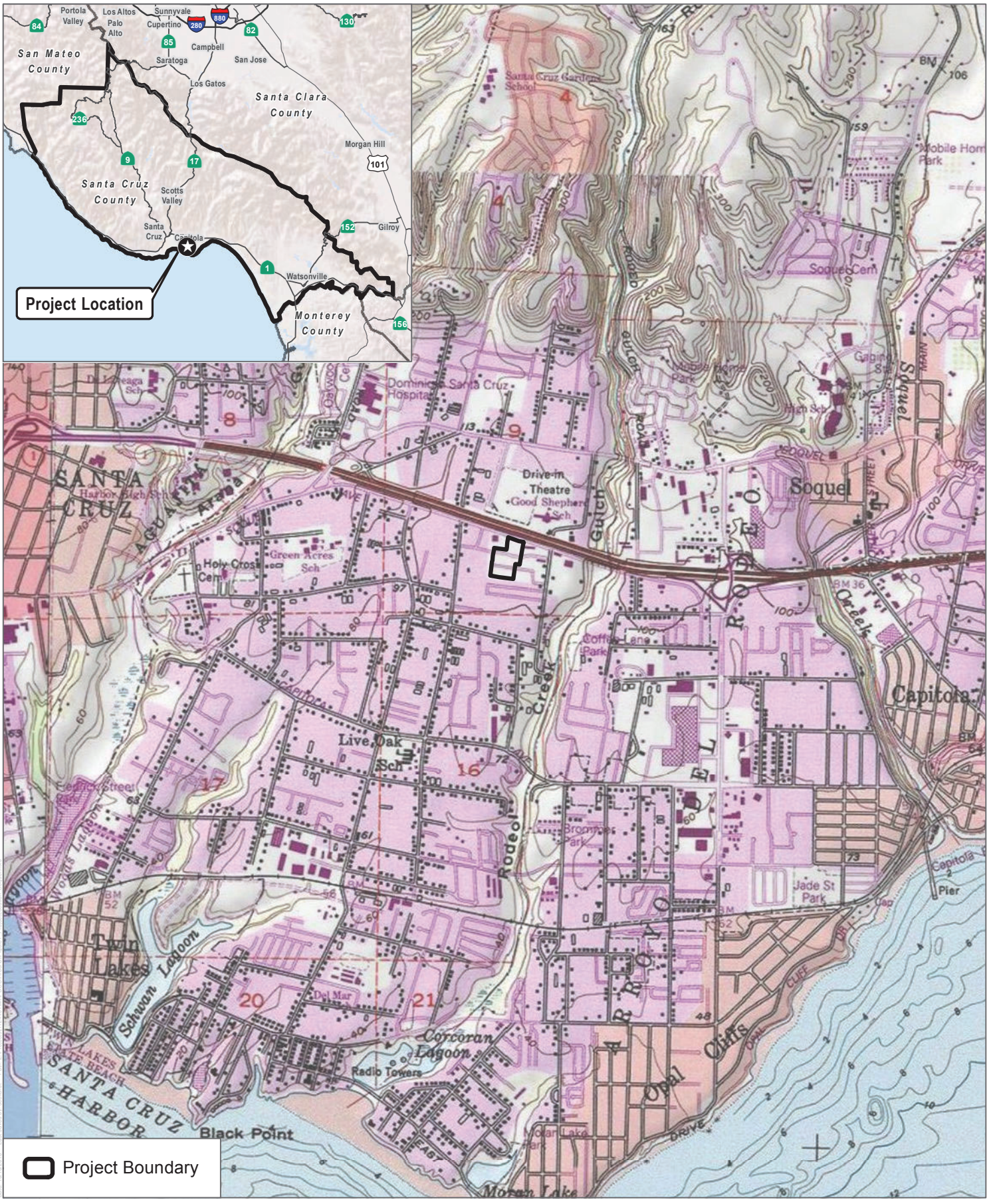
The property is located in unincorporated Santa Cruz County, south of Soquel Avenue between Chanticleer Avenue and Mattison Lane (Figure 1). The property is approximately 4.98 acres and is bounded by Soquel Avenue to the north, commercial development to the west, residential development to the south, and storage and landscape supply facilities to the east. The property encompasses Assessor's Parcel Number (APN) 029-021-47 and is located within the County's Urban Service Boundary.

General Physical Characteristics

The approximately 5-acre property is flat and provides yard space for numerous businesses, including those for towing, landscaping, and storage. Structures on the property consist of small, scattered, modular units and numerous vehicles are parked and stored across the property. The few trees on site are concentrated primarily in the central and southern portion of the property. Off-site and boundary line trees are located along the property's southern and western boundaries.

METHODS

An International Society of Arboriculture (ISA) Certified Arborist conducted a site evaluation on October 15, 2018 to document tree location and attribute information. Tree attribute information was collected for all on-site trees and for trees along the property's perimeter where canopies overhang the property line. Tree attribute data collected during the site evaluation included species, trunk diameter, tree height, canopy spread, general health condition, structural condition and presence of observable pests or other tree maladies. Trunk diameters were measured using a



SOURCE: USGS Topo 7.5 Minute Series Soquel Quadrangle
Township 11S / Range 1W / Sections 09

DUDEK

0 1,000 2,000 Feet
0 285 570 Meters
1:24,000

FIGURE 1

Project Location

Soquel Avenue Property (APN 029-021-47)

diameter tape which provides adjusted figures[1] for diameter measurements when wrapping the tape around a tree's circumference. Where access to trunks was infeasible (e.g., for off-site trees located behind fences), visual estimates of trunk diameter were made. Diameter measurements were made at 4.5 feet above grade, consistent with County Code (Section 16.34.030).

Pursuant to the Guide for Plant Appraisal[2], tree health and structure were evaluated with respect to five distinct tree components: roots, trunk, scaffold branches, small branches, and foliage. Each tree component was assessed with regard to health factors such as insect, fungal or pathogen damage, mechanical damage, presence of decay, presence of wilted or dead leaves, and wound closure. Components were graded as *good*, *fair*, *poor*, and *dead* with 'good' representing no apparent problems, and 'dead' representing a dying and/or dead tree. This method of tree condition rating is comprehensive and results in ratings that are useful for determining the status of trees based on common urban forestry standards.

Concurrent with individual tree attribute measurement and assessment, the location of each individual tree was hand-mapped on a geo-referenced aerial photo base map. Collected tree data and tree identification numbers correspond with the individual tree locations presented in Attachment A (Tree Location Exhibit) and the individual tree data presented in Attachment B (Tree Information Matrix).

Project Limitations

This report presents site tree information as observed in the field on October 15, 2018. No root crown excavations or investigations, internal probing, or aerial canopy inspections were performed during the tree assessments. Therefore, the presence or absence of internal decay or other hidden or inaccessible inferiorities in individual trees could not be confirmed. It is recommended that any large tree proposed for preservation in an urban setting be thoroughly inspected for internal or subterranean decay by a qualified arborist before finalizing preservation plans.

FINDINGS/RESULTS

There are a total of 29 trees located on or adjacent to subject property, including 9 different species, as presented in Table 1. Representative site photographs are presented in Attachment C.

1 Circumference measurement (inches) divided by 3.14 (π) provides diameter measurement in inches.

2 International Society of Arboriculture (ISA). 2000. Guide for Plant Appraisal (9th Edition).

Table 1
Summary of Trees – Soquel Avenue Property

Botanical Name	Common Name	Total
Acacia baileyana	Bailey acacia	2
Eucalyptus globulus	Blue gum	3
Fraxinus velutina	Arizona ash	6
Fraxinus angustifolia	Raywood ash	3
Pinus radiata	Monterey pine	2
Platanus acerifolia	London planetree	9
Quercus agrifolia	Coast live oak	1
Salix lasiolepis	Arroyo willow	2
Sequoia sempervirens	Coast redwood	1
	Total:	**29**

Overall, the on-site trees are in fair to poor health and structural condition. Off-site trees are generally in fair condition, likely a result of their locations in maintained landscape areas. It should also be noted that tree health assessments consider a number of observable tree characteristics. For example, a tree with a 'Fair' health rating is one that exhibits average overall health. There is nothing necessarily wrong with a tree given a 'Fair' rating, but it is simply not exhibiting better than average health. Trees with 'Fair' ratings can live for a very long time. Structural condition relates to the architecture of the tree. Trees with 'Poor' structural ratings usually have trunk issues (cavities, cracks, etc.), poor branch attachments that can lead to branch failure, or other structural soundness issues. This relates to the risk of a tree or tree part failing.

PROJECT-RELATED TREE IMPACTS

Based on a review of the preliminary site plan, it is assumed that the majority of the site will need to be graded to accommodate the construction of buildings, driveways, and the placement of necessary infrastructure, although proposed landscape areas may allow for retention of some trees. Landscape areas provide a buffer from development that could allow for retention of on-site trees in the southern portion of the property. The following summarizes anticipated tree impacts:

- 3 on-site trees may be retained (# 1, 3, and 4).
- 21 boundary line/off-site trees will be retained (# 2, 5-7, 13-29).
- 5 on-site trees will require removal (# 8-12).

RECOMMENDATIONS

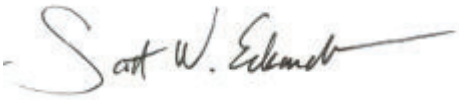
Retained trees (on and off-site) should be protected from construction-related impacts. Tree protection recommendations are provided in Attachment D. Pruning of any retained trees to accommodate construction should be conducted according to ANSI A300 tree pruning standards. Tree removal may become necessary due to site plan changes; where pruning of a tree's root system exceeds 25% of the estimated root zone; or pruning of a tree's canopy exceeds 25% of the existing tree canopy. The project applicant should consult with an ISA Certified Arborist to determine whether the root or canopy impact thresholds are exceeded.

CONCLUSION

Dudek inventoried and evaluated 29 trees on or adjacent to the subject property on October 15, 2018. Five of these trees will require removal, and the remaining 24 trees may be retained on-site. This report recommends implementing tree protection measures during construction for all retained on- and off-site trees to minimize potential construction-related impacts.

This report provides conclusions and recommendations based on an examination of the trees and surrounding site by an ISA Certified Arborist. Arborists are tree specialists who use their education, knowledge, training, and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce the risk of living near trees. Arborists cannot detect every condition that could possibly lead to the failure of a tree. Trees are living organisms that fail in ways not fully understood. Conditions are often hidden within trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. There are no guarantees that a tree's condition will not change over a short or long period due to weather or cultural or environmental conditions. Trees can be managed but not controlled. To live near trees is to accept some degree of risk. I would be pleased to answer any questions or respond to any comments regarding this tree evaluation.

Sincerely,



Scott Eckardt
ISA Certified Arborist #WE-5914A

Att: Attachment A – Tree Location Exhibit
Attachment B – Tree Information Matrix
Attachment C – Representative Photographs
Attachment D – Tree Protection Measures

ATTACHMENT A

Tree Location Exhibit

SOURCE: ESRI 2018

DUDEK

0 25 50 Feet

ATTACHMENT A

Tree Location Exhibit

Soquel Avenue Property (APN 029-021-47)

ATTACHMENT B

Tree Information Matrix

Tree Information Matrix & Impact Status																
Tree Number	Scientific Name	Common Name	Quantity of Stems	Diameter at Breast Height (in.)						Height (ft.)	Canopy Extent (ft.)	Health Condition	Structural Condition	Location	Impact	Notes
				Stem 1	Stem 2	Stem 3	Stem 4	Stem 5	Stem 6							
1	*Quercus agrifolia*	Coast live oak	1	12						20	25	fair	fair	On-site	Retain	behind chain link fence, adjacent to storage containers
2	*Sequoia sempervirens*	Coast redwood	1	60						60	30	good	fair	Property line	Retain	behind wood fence, on property line
3	*Salix lasiolepis*	Arroyo willow	4	8	6	6	5			20	20	fair	poor	On-site	Retain	poor pruning, sooty mold
4	*Salix lasiolepis*	Arroyo willow	6	8	8	8	6	6	4	25	25	fair	poor	On-site	Retain	poor pruning, sooty mold
5	*Eucalyptus globulus*	Blue gum	2	14	8					35	20	fair	fair	Property line	Retain	on property line, growing against wire fence, tortoise beetle damage
6	*Eucalyptus globulus*	Blue gum	2	4	3					15	8	poor	poor	Property line	Retain	suppressed
7	*Eucalyptus globulus*	Blue gum	1	6						20	8	fair	poor	Property line	Retain	suppressed
8	*Acacia baileyana*	Bailey acacia	1	17						25	20	fair	fair-poor	On-site	Remove	poor pruning, fence wire grown into trunk
9	*Acacia baileyana*	Bailey acacia	3	10	6	6				20	20	fair	poor	On-site	Remove	poor pruning, fence wire grown into trunk, trunk weep
10	*Fraxinus angustifolia*	Raywood ash	1	7						18	15	fair	fair	On-site	Remove	near landscape business trailer
11	*Fraxinus angustifolia*	Raywood ash	1	6						15	12	fair	fair	On-site	Remove	near landscape business trailer
12	*Fraxinus angustifolia*	Raywood ash	1	6						15	5	poor	poor	On-site	Remove	near landscape business trailer
13	*Pinus radiata*	Monterey pine	1	28						60	25	fair	fair	Off-site	Retain	near project entry
14	*Pinus radiata*	Monterey pine	1	32						55	30	fair	fair	Off-site	Retain	near project entry
15	*Platanus acerifolia*	London planetree	1	8						20	18	fair	fair	Off-site	Retain	on opposite side of wall in landscape area on adjacent property
16	*Platanus acerifolia*	London planetree	1	8						20	18	fair	fair	Off-site	Retain	on opposite side of wall in landscape area on adjacent property
17	*Platanus acerifolia*	London planetree	1	8						15	18	fair	fair	Off-site	Retain	on opposite side of wall in landscape area on adjacent property
18	*Fraxinus velutina*	Arizona ash	1	8						25	20	fair	fair	Off-site	Retain	on opposite side of wall in landscape area on adjacent property
19	*Fraxinus velutina*	Arizona ash	1	8						25	20	fair	fair	Off-site	Retain	on opposite side of wall in landscape area on adjacent property
20	*Fraxinus velutina*	Arizona ash	1	8						25	20	fair	fair	Off-site	Retain	on opposite side of wall in landscape area on adjacent property
21	*Platanus acerifolia*	London planetree	1	7						20	15	fair	fair	Off-site	Retain	on opposite side of wall in landscape area on adjacent property
22	*Platanus acerifolia*	London planetree	1	7						20	15	fair	fair	Off-site	Retain	on opposite side of wall in landscape area on adjacent property
23	*Platanus acerifolia*	London planetree	1	7						20	15	fair	fair	Off-site	Retain	on opposite side of wall in landscape area on adjacent property
24	*Fraxinus velutina*	Arizona ash	1	8						18	15	fair	fair	Off-site	Retain	on opposite side of wall in landscape area on adjacent property
25	*Fraxinus velutina*	Arizona ash	1	8						18	15	fair	fair	Off-site	Retain	on opposite side of wall in landscape area on adjacent property
26	*Fraxinus velutina*	Arizona ash	1	8						18	15	fair	fair	Off-site	Retain	on opposite side of wall in landscape area on adjacent property
27	*Platanus acerifolia*	London planetree	1	6						18	12	fair	fair	Off-site	Retain	on opposite side of wall in landscape area on adjacent property
28	*Platanus acerifolia*	London planetree	1	6						18	12	fair	fair	Off-site	Retain	on opposite side of wall in landscape area on adjacent property
29	*Platanus acerifolia*	London planetree	1	6						18	12	fair	fair	Off-site	Retain	on opposite side of wall in landscape area on adjacent property

ATTACHMENT C

Representative Photographs

ATTACHMENT C
Representative Photographs

Photo 1: Tree #1 Coast redwood along southern property line.

Photo 2: Trees #5-7 (left to right), blue gum trees along western property boundary line.

Photo 3: Trees #13-14 ,Monterey pines off-site, near property entrance.

Photo 4: Trees #17-20 (left to right), non-regulated trees on adjacent property with canopies overhanging property line.

ATTACHMENT D

Tree Protection Measures

Attachment D
Tree Management Recommendations and Protection Measures

The following sections are included as general guidelines for tree protection from construction impacts. The measures presented should be monitored by arborists and enforced by contractors and developers for maximum benefit to the trees.

Tree Protection Measures Prior to Construction

Prior to any grading activity, preserved trees with canopies that fall within 30 feet of construction activity shall be protected by fencing and signage. All contractors shall be made aware of the tree protection measures. A project arborist shall be assigned to monitor tree health and construction activity near retained trees on site. The project arborist shall be an International Society of Arboriculture (ISA) Certified Arborist.

Inspection: Any large tree proposed for preservation on site should be thoroughly inspected for internal or subterranean decay by a qualified arborist prior to construction activity to determine if retention/protection on site is a viable management option.

Site Preparation: Tree removal, pruning, and inspection should be conducted during site preparation activities. Where permitted by the County, tree removal and pruning activity should be conducted according to industry standards (ANSI A300).

Fencing and Signage: A 6-foot high, chain link fence with tree protection signs shall be erected around all trees (or tree groups) to be preserved. The protective fence should be installed at a distance from the trunk that is equal to the dripline radius, or a distance approved by the County Arborist. This will delineate the tree protection zone and prevent unwanted activity in and around the trees in order to reduce soil compaction in the root zones of the trees and other damage from heavy equipment. Fences are to be mounted on two-inch diameter galvanized iron posts, driven into the ground to a depth of at least 2-feet at no more than 10-foot spacing. In areas where fencing is located on paving or concrete that will not be demolished, then the posts may be supported by an appropriate grade level concrete base. Tree protection signs should be attached to every fourth post. The contractor shall maintain the fence to keep it upright, taut, and aligned at all times. Fencing shall be removed only after all construction activities are complete.

Pre-Construction Meeting: A pre-construction meeting shall be held between all contractors (including grading, tree removal/pruning, builders, etc.) and the arborist. The arborist will instruct the contractors on tree protection practices and answer any questions. All equipment operators and spotters, assistants, or those directing operators from the ground, shall provide written acknowledgement of their receiving tree protection training. This training shall include information on the location and marking of protected trees, the necessity of preventing damage, and the discussion of work practices that will accomplish such.

Protection and Maintenance during Construction

Once construction activities have begun the following measures shall be adhered to:

Avoidance: Signs, ropes, cables, or any other items shall not be attached to any preserved tree.

Equipment Operation and Storage: Operating heavy machinery around the root zones of trees will increase soil compaction, which decreases soil aeration and subsequently reduces water penetration in the soil. All heavy equipment and vehicles shall stay out of the fenced tree protection zone, unless where specifically approved in writing by the County Arborist and under the supervision of an ISA Certified Arborist.

Storage and Disposal: Do not store or discard any supply or material, including paint, lumber, concrete overflow, etc. within the fenced tree protection zone. Remove all foreign debris within the fenced tree protection zone; it is important to leave the duff, mulch, chips, and leaves around the retained trees for water retention and nutrients. Avoid draining or leakage of equipment fluids near retained trees. Fluids such as: gasoline, diesel, oils, hydraulics, brake and transmission fluids, paint, paint thinners, and glycol (anti-freeze) should be disposed of properly. Keep equipment parked outside of the fenced tree protection zone of retained trees to avoid the possibility of leakage of equipment fluids into the soil. The effect of toxic equipment fluids on the retained trees could lead to decline and death.

Grade Changes: Grade changes of more than 2 feet, including adding fill, are not permitted within 30 feet of a tree's drip line, without special written authorization and under supervision by an ISA Certified Arborist. Lowering the grade within 30 feet of a tree's dripline will necessitate cutting main support and feeder roots, jeopardizing the health and structural integrity of the tree(s). Adding soil, even temporarily, on top of the existing grade will compact the soil further, and decrease both water and air availability to the trees' roots.

Moving Construction Materials: Care will be taken when moving equipment or supplies near the trees, especially overhead. Avoid damaging the tree(s) when transporting or moving construction materials and working around retained trees (even outside of the fenced tree protection zone). Above ground tree parts that could be damaged (e.g., low limbs, trunks) should be flagged with red flagging. If contact with the tree crown is unavoidable, prune the conflicting branch(es) using ISA or ANSI A300 standards.

Trenching: All trenching shall be outside of the fenced tree protection zone. Roots primarily extend in a horizontal direction forming a support base to the tree similar to the base of a wineglass. Where trenching is necessary in areas that contain tree roots, prune the roots using a root pruner. All cuts should be clean and sharp, to minimize ripping, tearing, and fracturing of the root system. The trench should be made no deeper than necessary.

Irrigation: Trees that have been substantially root pruned (30% or more of their root zone) will require irrigation for the first twelve months. The first irrigation should be within 48 hours of root pruning. They should be deep watered every two to four weeks during the summer and once a month during the winter (adjust accordingly with rainfall). One irrigation cycle should thoroughly soak the root zones of the trees to a depth of 3 feet. The soil should dry out between watering; avoid keeping a consistently wet soil. Designate one person to be responsible for irrigating (deep watering) the trees. Check soil moisture with a soil probe before irrigating. Irrigation is best accomplished by installing a temporary above ground micro-spray system that will distribute water slowly (to avoid runoff) and evenly throughout the fenced tree protection zone ***but never soaking the area located within 6- feet of the tree trunk, especially during warmer months***. For trees not subject to root pruning activity, the amount of irrigation provided shall not be changed from that which was provided prior to the commencement of construction activity.

Canopy Pruning: All pruning shall be completed under the direction of an ISA Certified Arborist and using ISA guidelines. Only conflicting limbs and dead wood shall be removed from tree canopies.

Washing: Periodic washing of the foliage is recommended during construction but no more than once every two weeks. Washing should include the upper and lower leaf surfaces and the tree bark. This should continue beyond the construction period at a less frequent rate with a high-powered hose only in the early morning hours. Washing will help control dirt/dust buildup that can lead to mite and insect infestations.

Maintenance after Construction

Once construction is complete the tree protection fencing may be removed and the following measures performed to sustain and enhance the vigor of the preserved trees.

Mulch: Provide a 4-inch mulch layer under the canopy of trees. Mulch should include clean, organic mulch that will provide long-term soil conditioning, soil moisture retention, and soil temperature control.

Pruning: Pruning should *only* be done to maintain clearance and remove broken, dead or diseased branches. Pruning shall only take place following a recommendation by an ISA Certified Arborist and performed under the supervision of an ISA Certified Arborist. No more than 15% of the canopy shall be removed at any one time. All pruning shall conform to ISA or ANSI A300 standards.

Watering: Retained trees on site shall be watered as they were prior to the commencement of construction activity. Supplemental irrigation may be necessary for twelve months following substantial root pruning.

Watering Adjacent Plant Material: All plants near the trees shall be compatible with water requirements of said trees. Watering regime included in the site's landscape plan shall be developed with consideration for the water needs of retained trees.

Spraying: If the trees are maintained in a healthy state, regular spraying for insect or disease control should not be necessary. If a problem does develop, an ISA Certified Arborist should be consulted; the trees may require application of insecticides to prevent the intrusion of bark-boring beetles and other invading pests. All chemical spraying should be performed by a licensed applicator under the direction of a licensed pest control advisor.

Appendix C

2019 Stormwater Pipeline Biological Resources Evaluation

725 FRONT STREET, SUITE 400
SANTA CRUZ, CALIFORNIA 95060
T 831.600.1400 F 831.600.1401

November 22, 2019 11244-05

Candice Bigley
Project Manager
PMB | Advancing Healthcare Real Estate
3394 Carmel Mountain Road, Suite 200
San Diego, California 92121

Subject: Results of Biological Resources Constraints Evaluation for the Proposed Rodeo Gulch Storm Drain Project, Santa Cruz, California

Dear Ms. Bigley:

This report presents the results of a reconnaissance-level biological resources constraints evaluation conducted by Dudek along three alternative alignments of a new storm water pipeline between Chanticleer Avenue and Mattison Lane that terminates at outfalls just west of Rode Creek Gulch within the County of Santa Cruz, California (Figure 1). The purpose of the investigation was to identify and evaluate biological resource issues and potential constraints posed by such resources, including potential permitting and regulatory requirements. This letter report includes the following: (1) a description of the methods used to conduct the evaluation; (2) a brief description of existing habitat conditions on the site; and (3) an analysis of special-status plant and wildlife species and other sensitive biological resources potentially present.

The proposed storm drain alignments are located in Section 9 of Township 11 South, Range 1 West, of the Soquel California 7.5-minute U.S. Geological Survey quadrangle (Figure 1). The proposed project would include the construction footprint associated with the installation of a new storm drain extending from Assessor's Parcel Number 029-021-47 (between Chanticleer Avenue and Mattison Lane; Soquel Property), along Soquel Avenue, and terminating within the west bank of Rodeo Creek Gulch. Based on preliminary engineering drawings received by Ifland Engineering Inc. for the offsite storm drain (dated October 31, 2018 and updated October 29, 2019), a 48-inch reinforced concrete pipe culvert would be installed under the westbound Soquel Avenue and daylight south of the road either (1) within the riparian canopy of Rodeo Creek Gulch for a total length of approximately 1,420 linear feet (Option 1), (2) within the disturbed annual grassland adjacent to the Rodeo Creek Gulch for a total length of approximately 1,695 linear feet (Option 2), or (3) immediately south of Soquel Avenue to improve the existing outfall at the edge of the riparian canopy of Rodeo Creek Gulch for a total length of approximately 1,170 linear feet (Option 3). The storm drain outfall design for each option would consist of a concrete headwall with flared ends and a rock rip-rap apron. Option 3 is the preferred project alignment in order to reduce potential impacts and regulatory permitting associated with project implementation. The proposed alignment locations are illustrated on Figures 2 and 3, and Option 3 is shown on Figure 4.

Methods

Dudek searched the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB; CDFW 2019), U.S. Fish and Wildlife Service (USFWS) Inventory for Planning and Conservation (IPaC) database (USFWS 2019), and California Native Plant Society's (CNPS) Inventory of Rare and Endangered Plants data (CNPS Inventory) for records of special-status species occurrences in the vicinity of the project site, which

included a 300-foot buffer around the proposed storm drain alignments (study area). After reviewing the database results, Dudek biologist Ryan Henry and water infrastructure scientist Sheldon Leiker visited the site on April 23, 2019 to assess current conditions and evaluate the site's potential to support sensitive natural communities, and special-status plant and wildlife species. For the purposes of this report, sensitive natural communities are those communities (vegetation types) that are of limited distribution statewide or within a region and considered by CDFW to be a high priority for conservation based on their rarity and degree of threat. For the purposes of this report, special-status species are defined as follows:

- Species that are listed, formally proposed, or designated as candidates for listing as threatened or endangered under the federal Endangered Species Act;
- Species that are listed or designated as candidates for listing as rare, threatened, or endangered under the California Endangered Species Act;
- Plant species assigned to California Rare Plant Ranks 1A, 1B, and 2;
- Wildlife species designated as Species of Special Concern or Fully Protected by CDFW;
- Species that meet the definition of rare, threatened, or endangered under Section 15380 of the California Environmental Quality Act guidelines; and/or
- Species that are considered to be a taxon of special concern by local agencies.

The field survey also served to identify potential jurisdictional aquatic resources that occur on the project site. Jurisdictional aquatic resources include wetlands, streams, and creeks, among other aquatic features, that are subject to regulation under the federal Clean Water Act (CWA), California Porter-Cologne Water Quality Act (Porter-Cologne), California Fish and Game Code (CFGC), and/or California Coastal Act (CCA).

Existing Conditions

The surrounding area is substantially developed and includes transportation corridors, parking lots, and commercial land uses. The study area is characterized by the following vegetation communities and land covers: developed, disturbed annual grassland, and riparian oak woodland (Rodeo Creek Gulch; Figure 2). The developed land cover type includes transportation routes, parking lots, and commercial land that supports very limited ornamental tree and shrub plantings along Soquel Avenue and the commercial parcels to the south. Disturbed annual grassland is limited to a narrow strip along the west side of Rodeo Creek Gulch. This vegetation community is composed of ruderal and non-native species including bur clover (*Medicago polymorpha*), Harding grass (*Phalaris* sp.), perennial rye grass (*Festuca perennis*), soft brome (*Bromus hordeaceus*), wild oat (*Avena fatua*), wild radish (*Raphanus raphanistrum*), and a few other herbaceous species commonly found in heavily disturbed areas. The riparian oak woodland spans the width of the gently sloping grades along Rodeo Creek Gulch. This natural woodland community was characterized by a dense overstory of mature coast live oak (Quercus agrifolia) trees with some arroyo willow (*Salix lasiolepis*) and California bay (*Umbellularia californica*). The understory consisted of a mix of shrubs, vines, and herbaceous species, including California blackberry (*Rubus ursinus*), curly doc (*Rumex crispus*), English ivy (*Hedera helix*), narrow-leaf plantain (*Plantago lanceolata*), and poison oak (*Toxicodendron diversilobum*).

Wildlife species detected on or in the immediate vicinity of the site included the following: American crow (*Corvus brachyrhynchos*), Bewick's wren (*Thryomanes bewickii*), Botta's pocket gopher (*Thomomys bottae*), California ground squirrel (*Spermophilus* [*Otospermophilus*] *beecheyi*), California towhee (*Melozone crissalis*), Pacific-slope

flycatcher (*Empidonax difficilis*), spotted towhee (*Pipilo maculatus*), and yellow-rumped warbler (*Setophaga coronata*). The study area also provides habitat for other common, urban-adapted wildlife species such as fox squirrel (*Sciurus niger*), northern raccoon (*Procyon lotor*), and striped skunk (*Mephitis mephitis*).

Results

Results of the CNDDB, IPaC, and CNPS searches (Appendix A) identified records for 12 special-status plant species and 12 special-status wildlife species within the region of the project site. A total of 14 species (10 plants and 4 wildlife) were removed from consideration based on a lack of suitable habitat or soil substrates, or because the project site is outside the known geographic or elevation range for the species. Two special-status plants and four special-status wildlife have at least a moderate potential to occur within the annual grassland and oak woodland vegetation communities occurring on the project site. It should be noted that the foothill yellow-legged frog (*Rana boylii*; State candidate as threatened) has been documented within the region, but has a low potential to occur within the study area due to lack of suitable habitat.

Due to the extent of disturbance and urbanized nature of the western portion of the study area (and along Soquel Avenue), the potential occurrence of special-status plant and wildlife species is considered highly unlikely. However, the riparian oak woodland community associated with Rodeo Creek Gulch supports potential habitat for several special-status species. Table 1 summarizes the species that have potential to occur at the project site.

Table 1: Potentially Occurring Special-Status Species

Scientific Name	Common Name	Status (Federal/State/CRPR)
Plants		
Holocarpha macradenia	Santa Cruz tarplant	FT/SE/1B.1
Pentachaeta bellidiflora	white-rayed pentachaeta	FE/SE/1B.1
Wildlife		
Rana draytonii	California red-legged frog	FT/SSC
Actinemys marmorata	western pond turtle	None/SSC
Antrozous pallidus	pallid bat	None/SSC
Corynorhinus townsendii	Townsend's big-eared bat	None/SSC

Status:
Federal
FE – Federally endangered
FT – State endangered
State
CT – Candidate threatened
SE – State endangered
SSC – Species of Special Concern
CRPR (California Rare Plant Rank)
1B.1 – (1B) Plants rare, threatened, or endangered in California and elsewhere; (.1) Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)

One natural drainage (Rodeo Creek Gulch) and several erosional features along the western bank were investigated as potential jurisdictional resources within the project site. Portions of Rodeo Creek Gulch occur along the

easternmost portion of the project site, which were investigated due to their topographic setting, riparian-like geomorphology, and presence of hydrology. This natural perennial drainage is characterized by a coast live oak woodland vegetation community and supports a clearly defined ordinary high water mark (just east of the study area), as well as connectivity to downstream receiving waters (Pacific Ocean). In addition to the creek mainstem, a floodprone area along the western bank most likely supports adjacent wetland "water of the U.S." and the entire lateral extent of oak trees (riparian canopy) within the gulch is considered (or meets the criteria to be considered) "waters of the State" due to it's physical, hydrological, and biological characteristics. As a result, the mainstem, adjacent floodprone area, and riparian canopy of Rodeo Creek Gulch would be considered jurisdictional aquatic resources regulated under the CWA, Porter-Cologne, and CFGC (Figure 2). The project site is not within the coastal zone as defined by the CCA.

Other features investigated included several discontinuous, erosional swales located on the gently-sloping western bank of Rodeo Creek Gulch. These features originate from the adjacent developed areas and roadways, lack any established vegetation, and would most likely not constitute aquatic jurisdictional resources.

Potential Biological Constraints and Recommendations

This section addresses potential biological constraints and impacts associated with implementation of the preferred project alignment (Option 3): sensitive vegetation communities/environmentally sensitive areas, special-status plant species, special-status wildlife species, migratory and nesting birds, and jurisdictional wetlands and streambeds.

Installation of the proposed storm drain would result in ground disturbance from trenching activities primarily to the disturbed land cover (Soquel Avenue). However, a small portion of the Option 3 storm drain and outfall structure would result in ground disturbance to approximately 62 linear feet underneath the oak woodland vegetation community. Direct temporary and permanent impacts to the oak woodland could be significant due to the potential for special-status species and their habitats, and CDFW-jurisdictional streambed. Indirect temporary impacts to special-status species and their habitats could also occur during construction activities. Based on these preliminary impact assumptions, the need for additional focused or protocol-level surveys to support the proposed project's CEQA analysis and documentation, as well as potential opportunities for resource protection, minimization, and mitigation is provided where appropriate.

- **Sensitive Vegetation Communities/Environmentally Sensitive Areas.** Sensitive vegetation communities and environmentally sensitive areas are vegetation types, associations, or sub-associations that (1) support concentrations of special-status plant or wildlife species, (2) are relatively limited in distribution, and/or (3) are of particular value to wildlife. The CNDDB provides an inventory of vegetation types that are collectively considered sensitive local, state, and federal entities. The oak woodland vegetation community associated with Rodeo Creek Gulch within the most eastern portion of the study area is a riparian habitat type and is considered sensitive due to its limited distribution and high potential to support threatened and endangered plant and wildlife species. Oak woodlands are not afforded legal protection unless they support special-status plant or wildlife species. Since the on-site community has the potential to support special-status species (see discussion below); mitigation measures implemented for special-status species are expected to be protective of sensitive vegetation communities and environmentally sensitive areas.

- **Special-Status Plants.** As described above, two special-status plant species have the potential to occur within the annual grassland and oak woodland vegetation communities. Due to the potential for these species to occur within the study area, Dudek recommends that two focused plant surveys be performed in the months of April, May, and/or June to cover the overlapping blooming periods. If special-status plant species are detected within the study area, then appropriate avoidance and minimization should be incorporated within the project design. If these species are found within the construction footprint, mitigation measures should be identified to avoid or minimize impacts.
- **Special-Status Wildlife.** As described above, a number of special-status wildlife species have the potential to occur within the oak woodland associated with Rodeo Creek Gulch, including California red-legged frog, foothill yellow-legged frog, western pond turtle, pallid bat, and Townsend's big-eared bat. If any construction takes place within the oak woodland, a formal habitat assessment for California red-legged frog (and foothill yellow-legged frog) should be conducted by a qualified biologist. If habitat is determined to be suitable, additional surveys (up to eight) conducted between April and September, or mitigation for this species may be warranted. In addition, before any ground-disturbing activities take place, a preconstruction survey for western pond turtle should also be conducted. Finally, restrictions on the timing of any construction activities should be limited to daylight hours to reduce disturbance to foraging bat species occurs. However, a preconstruction field survey should be conducted to determine whether active bat roosts are present on or within 50 feet of the project site.

  If special-status wildlife species are detected within the project site, then appropriate avoidance and minimization should be incorporated into the project design. A formal analysis of potential impacts to special-status wildlife resulting from the proposed project and identification of adequate compensatory mitigation, following the CEQA guidelines, is recommended.
- **Migratory and Nesting Birds.** The project site supports potential nesting habitat for both raptors and songbirds due to the presence of trees, shrubs, and other ground cover. Nesting activity typically occurs from mid-February to mid-August. Disturbing or destroying active nests is a violation of the federal Migratory Bird Treaty Act. In addition, nests and eggs are protected under California Fish and Game Code Section 3503. Mitigation for the potential taking of migratory bird species could be accomplished in one of two ways. First, efforts should be made to schedule all vegetation removal activities outside the nesting season (typically February 15 to August 15) to avoid potential impacts to nesting birds. This would ensure that no active nests would be disturbed and that habitat removal could proceed rapidly. Secondly, if initial vegetation removal occurs during the nesting season, all suitable habitat should be thoroughly surveyed by a qualified biologist for the presence of nesting birds before commencement of clearing. If any active nests are detected, a buffer of at least 100 feet (300 feet for raptors) should be delineated, flagged, and avoided until the nesting cycle is complete as determined by a qualified biologist.
- **Jurisdictional Wetlands and Streambeds.** The project site and study area contain jurisdictional areas regulated by the U.S. Army Corps of Engineers, CDFW, and the Regional Water Quality Control Board. Rodeo Creek Gulch is a perennial drainage that is physically and hydrologically connected with the Pacific Ocean. The creek's mainstem (located just outside the study area), adjacent floodprone area, and lateral extent of the riparian canopy is considered (or meets the criteria to be considered) wetland and non-wetland waters of the U.S. and waters of the State. The proposed storm drain alignment and outfall (approximately 62 linear feet) would impact CDFW jurisdictional streambed, and possibly RWQCB jurisdictional waters. This impact would require acquisition of California Fish and Game Code Section 1602 Streambed Alteration Agreement from the CDFW, and possibly a Clean Water Act Section

401 Water Quality Certification and/or Porter-Cologne Water Quality Act Waste Discharge Requirement permit from the RWQCB. In order to determine the extent of jurisdiction and any potential impacts, a formal delineation of waters of the U.S./State is recommended to support the proposed project's CEQA analysis, documentation, and regulatory permitting.

Conclusions

The proposed project is subject to several state and federal statutes and regulations including the federal Endangered Species Act (ESA), the California ESA, the federal CWA, and various provisions of the CFGC. These programs were developed to protect natural communities, state- and federally-listed plants and wildlife, special-status species not afforded state or federal protections, and aquatic resources including wetlands, streambeds, ephemeral drainages, and riparian habitats.

Based on the results of this preliminary assessment, potential constraints to the implementation of the project were identified. These include the potential presence of sensitive vegetation communities, special-status plants and wildlife, potential foraging and nesting habitat for raptors and songbirds, potential jurisdictional aquatic resources, and protected trees. As a result, Dudek recommends the following actions:

- Conduct two special-status plant surveys between April, May, and/or June during the blooming period of the target species, and if identified implement measures to protect in-place or mitigate through preparation of a plant restoration/salvage plan.
- Conduct a focused habitat assessment for the California red-legged frog (and foothill yellow-legged frog).
- Restrict construction activities to daylight hours to ensure no disturbance to foraging bat species occurs. Additionally, conduct a preconstruction roosting bat survey in late April or early May in the season before construction begins.
- Conduct a nesting bird survey just prior to grading if construction activities occur between mid-February and mid-August.
- Conduct at formal jurisdictional delineation of waters of the U.S./State, including wetlands within the eastern portion of the project site within the disturbed annual grassland and oak woodland.

Please contact me if you have any questions or require further information.

Sincerely,

Ryan Henry
Senior Biologist

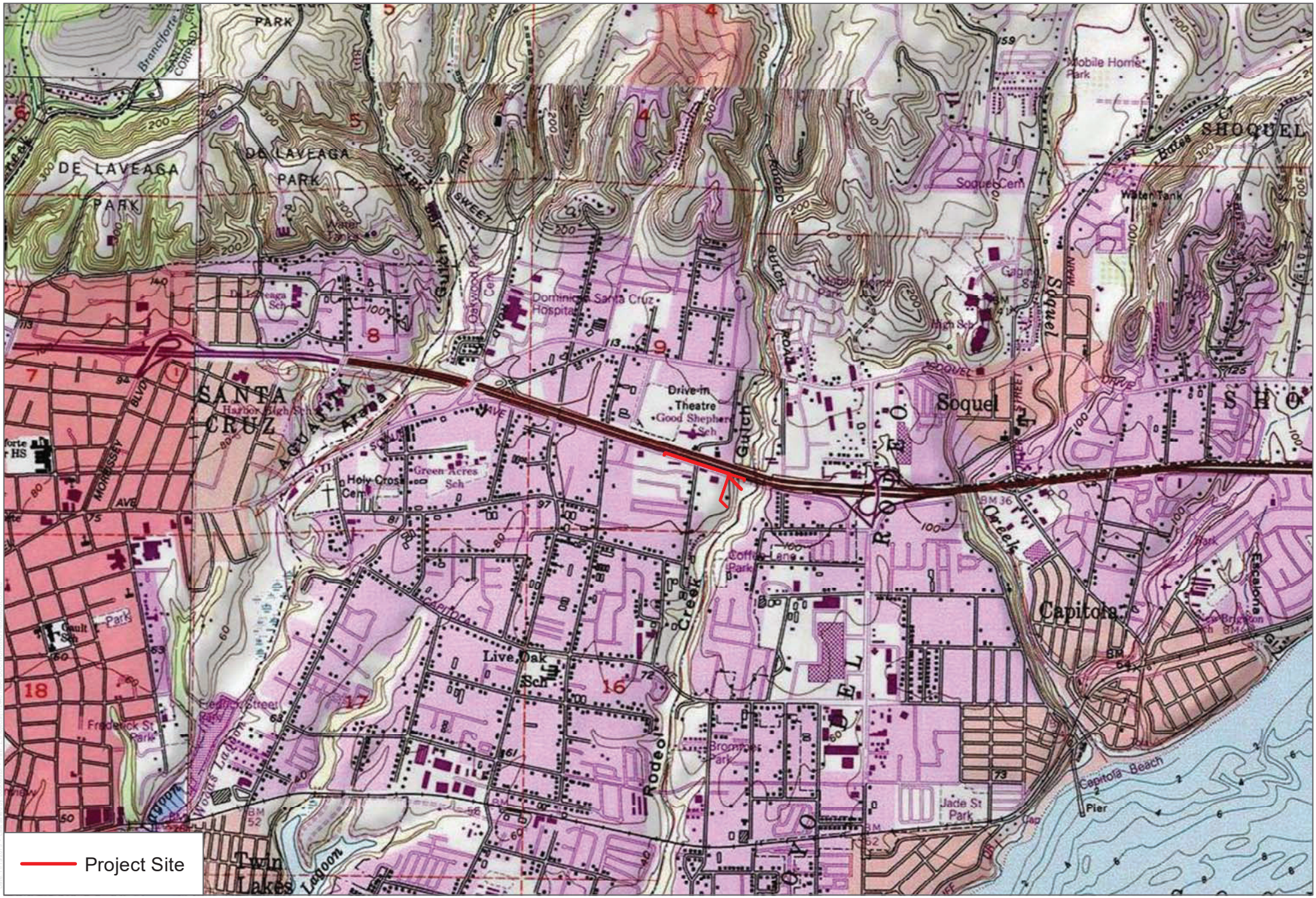
Att.: *Figure 1 – Project Location*
Figure 2 – Proposed Project and Environmental Setting
Figure 3 – Location of Storm Drain Alignment Options
Figure 4 – Option 3 Site Plan
Appendix A – CNDDB, CNPS, and IPaC Database Search Results

References

California Department of Fish and Wildlife. 2019. RareFind 5: Commercial Version. Biogeographic Data Branch. Sacramento, California: California Natural Diversity Database. Website https://map.dfg.ca.gov/rarefind/view/RareFind.aspx [accessed April 2019].

U.S. Fish and Wildlife Service. 2019. Environmental Conservation Online System, Information for Planning and Conservation Report (online edition). Website http://ecos.fws.gov/ipac/ [accessed April 2019].

California Native Plant Society, Rare Plant Program. 2019. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society, Sacramento, California. Website http://www.rareplants.cnps.org/ [accessed April 2019].



SOURCE: USGS, 2018

DUDEK

0 1,000 2,000 Feet

FIGURE 1

Project Location

Rodeo Gulch Storm Drain Project

SOURCE: NHD, 2018
ESRI, 2018

DUDEK

0 100 200 Feet

FIGURE 2

Proposed Project and Environmental Setting

Rodeo Gulch Storm Drain Project

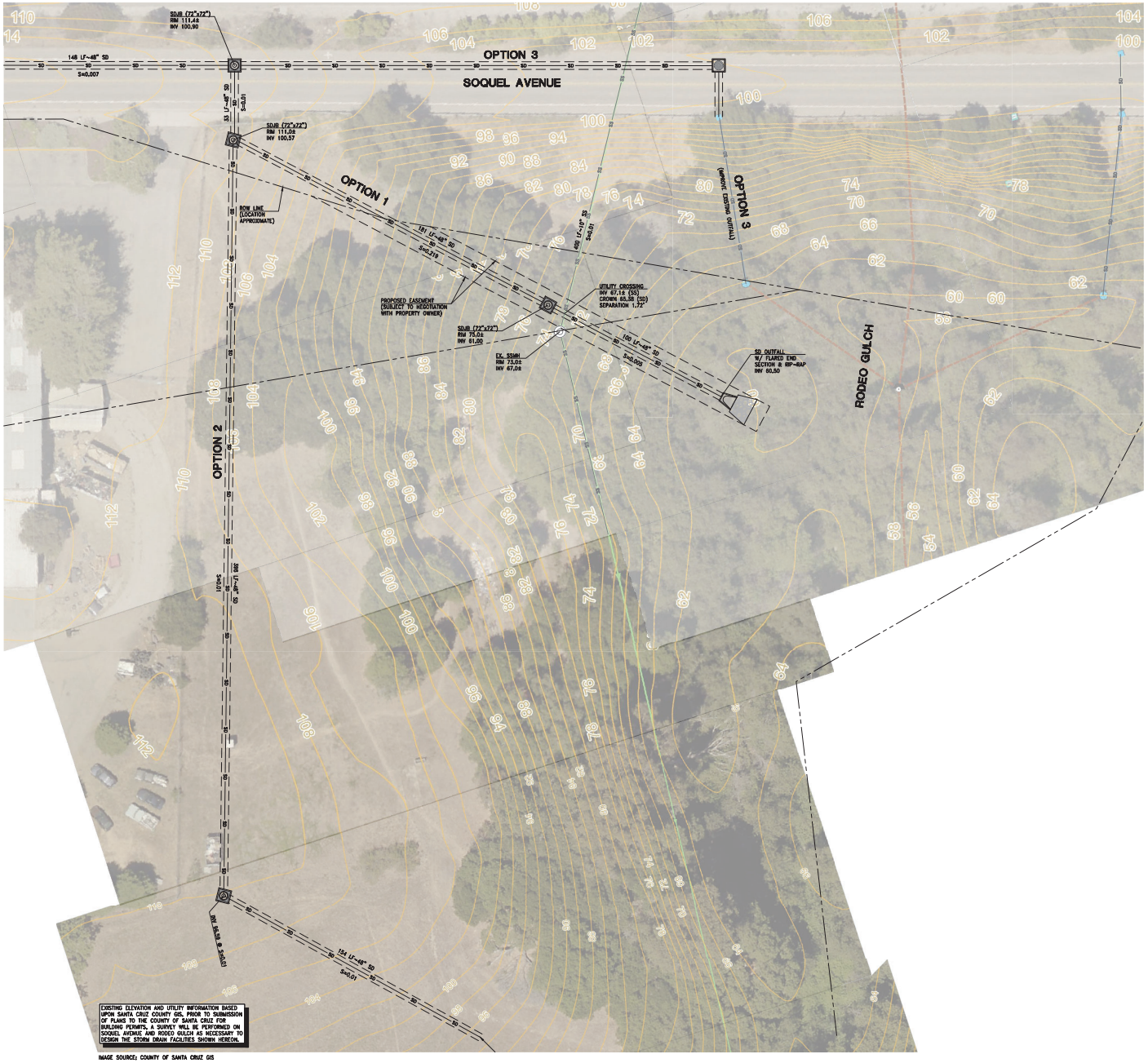


FIGURE 3

Location of Storm Drain Alignment Options

Rodeo Gulch Storm Drain Project

DUDEK

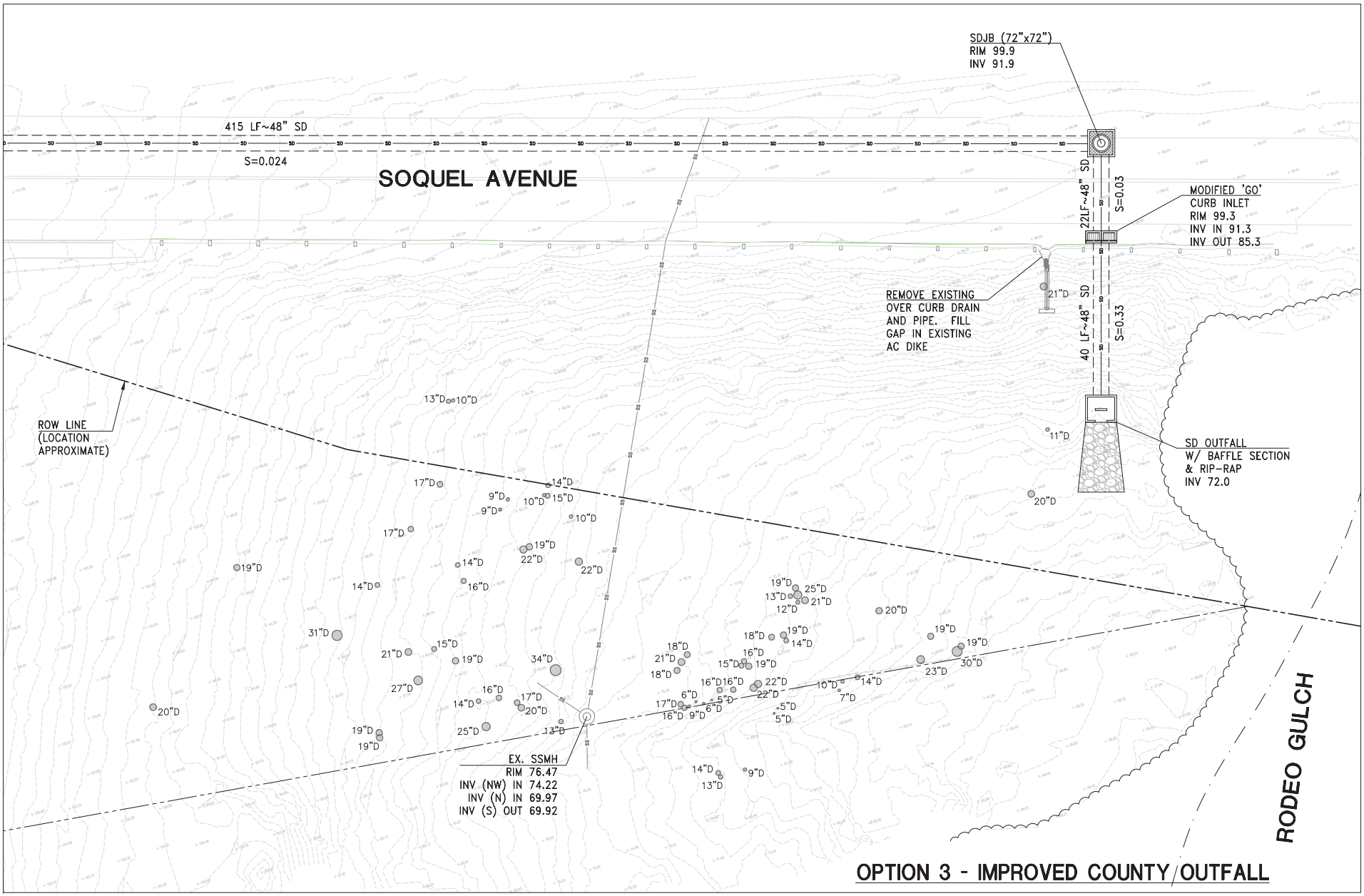


FIGURE 4

Option 3 Site Plan

Rodeo Gulch Storm Drain Project

DUDEK

Appendix A

CNDDB, CNPS, and IPaC Database Search Results

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Soquel (3612188))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Ambystoma macrodactylum croceum Santa Cruz long-toed salamander	AAAAA01082	Endangered	Endangered	G5T1T2	S1S2	FP
Antrozous pallidus pallid bat	AMACC10010	None	None	G5	S3	SSC
Arctostaphylos andersonii Anderson's manzanita	PDERI04030	None	None	G2	S2	1B.2
Bombus caliginosus obscure bumble bee	IIHYM24380	None	None	G4?	S1S2	
Bombus occidentalis western bumble bee	IIHYM24250	None	None	G2G3	S1	
Chorizanthe robusta var. robusta robust spineflower	PDPGN040Q2	Endangered	None	G2T1	S1	1B.1
Cicindela ohlone Ohlone tiger beetle	IICOL026L0	Endangered	None	G1	S1	
Corynorhinus townsendii Townsend's big-eared bat	AMACC08010	None	None	G3G4	S2	SSC
Coturnicops noveboracensis yellow rail	ABNME01010	None	None	G4	S1S2	SSC
Danaus plexippus pop. 1 monarch - California overwintering population	IILEPP2012	None	None	G4T2T3	S2S3	
Dicamptodon ensatus California giant salamander	AAAAH01020	None	None	G3	S2S3	SSC
Emys marmorata western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
Eucyclogobius newberryi tidewater goby	AFCQN04010	Endangered	None	G3	S3	SSC
Holocarpha macradenia Santa Cruz tarplant	PDAST4X020	Threatened	Endangered	G1	S1	1B.1
Lasthenia californica ssp. macrantha perennial goldfields	PDAST5L0C5	None	None	G3T2	S2	1B.2
Linderiella occidentalis California linderiella	ICBRA06010	None	None	G2G3	S2S3	
Monolopia gracilens woodland woollythreads	PDAST6G010	None	None	G3	S3	1B.2
Oncorhynchus mykiss irideus pop. 8 steelhead - central California coast DPS	AFCHA0209G	Threatened	None	G5T2T3Q	S2S3	
Pedicularis dudleyi Dudley's lousewort	PDSCR1K0D0	None	Rare	G2	S2	1B.2
Pentachaeta bellidiflora white-rayed pentachaeta	PDAST6X030	Endangered	Endangered	G1	S1	1B.1

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Rana boylii foothill yellow-legged frog	AAABH01050	None	Candidate Threatened	G3	S3	SSC
Thaleichthys pacificus eulachon	AFCHB04010	Threatened	None	G5	S3	
Trifolium buckwestiorum Santa Cruz clover	PDFAB402W0	None	None	G2	S2	1B.1
Trimerotropis infantilis Zayante band-winged grasshopper	IIORT36030	Endangered	None	G1	S1	
Tryonia imitator mimic tryonia (=California brackishwater snail)	IMGASJ7040	None	None	G2	S2	

Record Count: 25

CNPS California Native Plant Society

Inventory of Rare and Endangered Plants

Plant List

15 matches found. *Click on scientific name for details*

Search Criteria

Found in Quad 3612188

Modify Search Criteria | Export to Excel | Modify Columns | Modify Sort | Display Photos

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank	State Listing Status	Federal Listing Status	Habitats	Lowest Elevation	Highest Elevation	CA Endemic
Arctostaphylos andersonii	Anderson's manzanita	Ericaceae	perennial evergreen shrub	Nov-May	1B.2	S2	G2			• Broadleafed upland forest • Chaparral • North Coast coniferous forest	60 m	760 m	yes
Chorizanthe pungens var. hartwegiana	Ben Lomond spineflower	Polygonaceae	annual herb	Apr-Jul	1B.1	S1	G2T1		FE	• Lower montane coniferous forest (maritime ponderosa pine sandhills)	90 m	610 m	yes
Chorizanthe robusta var. robusta	robust spineflower	Polygonaceae	annual herb	Apr-Sep	1B.1	S1	G2T1		FE	• Chaparral (maritime) • Cismontane woodland (openings) • Coastal dunes • Coastal scrub	3 m	300 m	yes
Grindelia hirsutula var. maritima	San Francisco gumplant	Asteraceae	perennial herb	Jun-Sep	3.2	S1	G5T1Q			• Coastal bluff scrub • Coastal scrub • Valley and foothill grassland	15 m	400 m	yes
Holocarpha macradenia	Santa Cruz tarplant	Asteraceae	annual herb	Jun-Oct	1B.1	S1	G1	CE	FT	• Coastal prairie • Coastal scrub • Valley and foothill grassland	10 m	220 m	yes
Horkelia cuneata var. sericea	Kellogg's horkelia	Rosaceae	perennial herb	Apr-Sep	1B.1	S1?	G4T1?			• Closed-cone coniferous forest • Chaparral (maritime) • Coastal dunes • Coastal scrub	10 m	200 m	yes
Lasthenia californica ssp. macrantha	perennial goldfields	Asteraceae	perennial herb	Jan-Nov	1B.2	S2	G3T2			• Coastal bluff scrub • Coastal	5 m	520 m	yes

										dunes • Coastal scrub		
Micropus amphibolus	Mt. Diablo cottonweed	Asteraceae	annual herb	Mar-May	3.2	S3S4	G3G4			• Broadleafed upland forest • Chaparral • Cismontane woodland • Valley and foothill grassland	45 m	825 m yes
Monolopia gracilens	woodland woolythreads	Asteraceae	annual herb	(Feb) Mar-Jul	1B.2	S3	G3			• Broadleafed upland forest (openings) • Chaparral (openings) • Cismontane woodland • North Coast coniferous forest (openings) • Valley and foothill grassland	100 m	1200 m yes
Pedicularis dudleyi	Dudley's lousewort	Orobanchaceae	perennial herb	Apr-Jun	1B.2	S2	G2	CR		• Chaparral (maritime) • Cismontane woodland • North Coast coniferous forest • Valley and foothill grassland	60 m	900 m yes
Penstemon rattanii var. kleei	Santa Cruz Mountains beardtongue	Plantaginaceae	perennial herb	May-Jun	1B.2	S2	G4T2			• Chaparral • Lower montane coniferous forest • North Coast coniferous forest	400 m	1100 m yes
Pentachaeta bellidiflora	white-rayed pentachaeta	Asteraceae	annual herb	Mar-May	1B.1	S1	G1	CE	FE	• Cismontane woodland • Valley and foothill grassland (often serpentinite)	35 m	620 m yes
Plagiobothrys diffusus	San Francisco popcornflower	Boraginaceae	annual herb	Mar-Jun	1B.1	S1	G1Q	CE		• Coastal prairie • Valley and foothill grassland	60 m	360 m yes
Sidalcea malachroides	maple-leaved checkerbloom	Malvaceae	perennial herb	(Mar) Apr-Aug	4.2	S3	G3			• Broadleafed upland forest • Coastal prairie • Coastal scrub • North Coast coniferous	0 m	730 m

Trifolium buckwestiorum	Santa Cruz clover	Fabaceae	annual herb	Apr-Oct	1B.1	S2	G2		forest • Riparian woodland • Broadleafed upland forest • Cismontane woodland • Coastal prairie	105 m	610 m	yes

Suggested Citation

California Native Plant Society, Rare Plant Program. 2019. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website http://www.rareplants.cnps.org [accessed 22 April 2019].

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IPaC Information for Planning and Consultation **U.S. Fish & Wildlife Service**

IPaC resource list

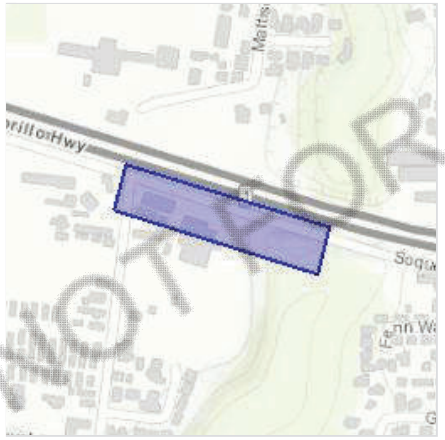
This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

NOT FOR CONSULTATION

Location

Santa Cruz County, California



Local office

Ventura Fish And Wildlife Office

(805) 644-1766
(805) 644-3958

2493 Portola Road, Suite B
Ventura, CA 93003-7726

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species

[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

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1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

NOT FOR CONSULTATION

Birds

NAME	STATUS
California Least Tern Sterna antillarum browni No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8104	Endangered
Least Bell's Vireo Vireo bellii pusillus There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/5945	Endangered
Marbled Murrelet Brachyramphus marmoratus There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/4467	Threatened
Southwestern Willow Flycatcher Empidonax traillii extimus There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/6749	Endangered
Western Snowy Plover Charadrius nivosus nivosus There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/8035	Threatened

Reptiles

NAME	STATUS
San Francisco Garter Snake Thamnophis sirtalis tetrataenia No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/5956	Endangered

Amphibians

NAME	STATUS
California Red-legged Frog Rana draytonii There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/2891	Threatened
California Tiger Salamander Ambystoma californiense There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/2076	Threatened

NOT FOR CONSULTATION

Santa Cruz Long-toed Salamander Ambystoma macrodactylum croceum — Endangered

There is **proposed** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/7405

Fishes

NAME	STATUS
Tidewater Goby Eucyclogobius newberryi	Endangered

There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/57

Insects

NAME	STATUS
Ohlone Tiger Beetle Cicindela ohlone	Endangered

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/8271

Zayante Band-winged Grasshopper Trimerotropis infantilis	Endangered

There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/1036

Flowering Plants

NAME	STATUS
Marsh Sandwort Arenaria paludicola	Endangered

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/2229

Santa Cruz Tarplant Holocarpha macradenia	Threatened

There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/6832

Scotts Valley Polygonum Polygonum hickmanii	Endangered

There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/3222

NOT FOR CONSULTATION

Scotts Valley Spineflower Chorizanthe robusta var. hartwegii Endangered
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/7108

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

NOT FOR CONSULTATION

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREE IN SEASON I A BREE IN SEASON IS IN ICATE OR A BIR ON OUR LIST THE BIR MA BREE IN OUR PRO ECT AREA SOMETIME ITHIN THE TIME RAME SPECI IE HICH IS A VER LIBERAL ESTIMATE O THE ATES INSI E HICH THE BIR BREE S ACROSS ITS ENTIRE RAN E. "BREE S ELSE HERE" IN ICATES THAT THE BIR OES NOT LI EL BREE IN OUR PRO ECT AREA.
Allen's Hummingbird Selasphorus sasin This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9637	Breeds Feb 1 to Jul 15
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31
Black Oystercatcher Haematopus bachmani This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9591	Breeds Apr 15 to Oct 31
Black Skimmer Rynchops niger This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/5234	Breeds May 20 to Sep 15
Black Swift Cypseloides niger This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8878	Breeds Jun 15 to Sep 10
Black Turnstone Arenaria melanocephala This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere

NOT FOR CONSULTATION

Burrowing Owl Athene cunicularia — Breeds Mar 15 to Aug 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9737

California Thrasher Toxostoma redivivum — Breeds Jan 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Clark's Grebe Aechmophorus clarkii — Breeds Jan 1 to Dec 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Common Yellowthroat eothlypis trichas sinuosa — Breeds May 20 to Jul 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/2084

Costa's Hummingbird Calypte costae — Breeds Jan 15 to Jun 10
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9470

Golden Eagle A uila chrysaetos — Breeds Jan 1 to Aug 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1680

Lawrence's Goldfinch Carduelis lawrencei — Breeds Mar 20 to Sep 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9464

Lewis's Woodpecker Melanerpes lewis — Breeds Apr 20 to Sep 30
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9408

Long-billed Curlew Numenius americanus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/5511

NOT FOR CONSULTATION

Marbled Godwit Limosa fedoa — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9481

Nuttall's Woodpecker Picoides nuttallii — Breeds Apr 1 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9410

Oak Titmouse Baeolophus inornatus — Breeds Mar 15 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9656

Rufous Hummingbird selasphorus rufus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8002

Short-billed Dowitcher Limnodromus griseus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9480

Song Sparrow Melospiza melodia — Breeds Feb 20 to Sep 5
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Spotted Towhee Pipilo maculatus clementae — Breeds Apr 15 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/4243

Tricolored Blackbird Agelaius tricolor — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3910

Whimbrel Numenius phaeopus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9483

Willet Tringa semipalmata — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

NOT FOR CONSULTATION

Wrentit Chamaea fasciata Breeds Mar 15 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ Proper Interpretation and Use of Your Migratory Bird Report before using or attempting to interpret this report.

ro a ility of resence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 1; at week 20 it is 0.05/0.25 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

reedin eason (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

urvey ffort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

o ata (–)

A week is marked as having no data if there were no survey events for that week.

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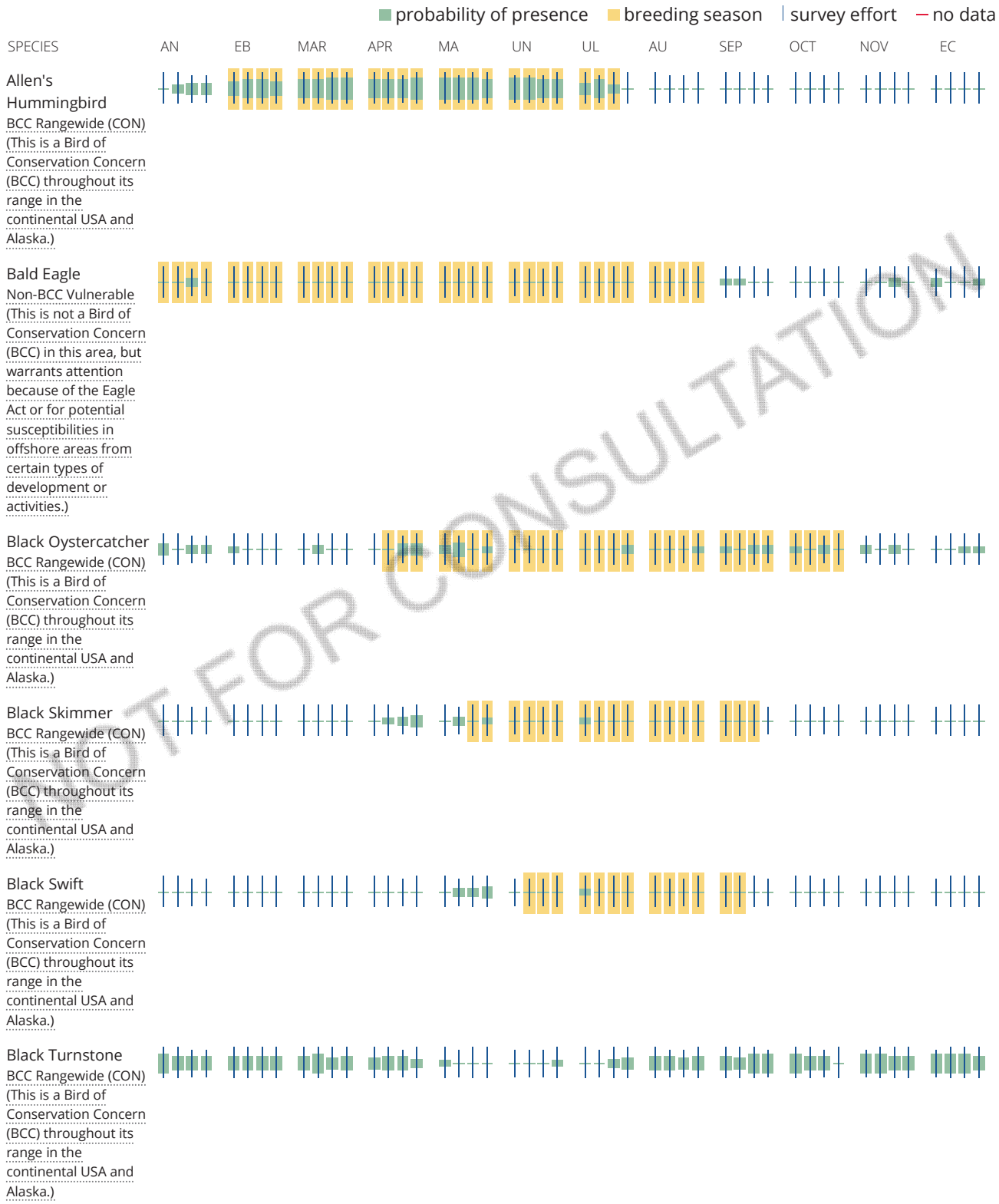
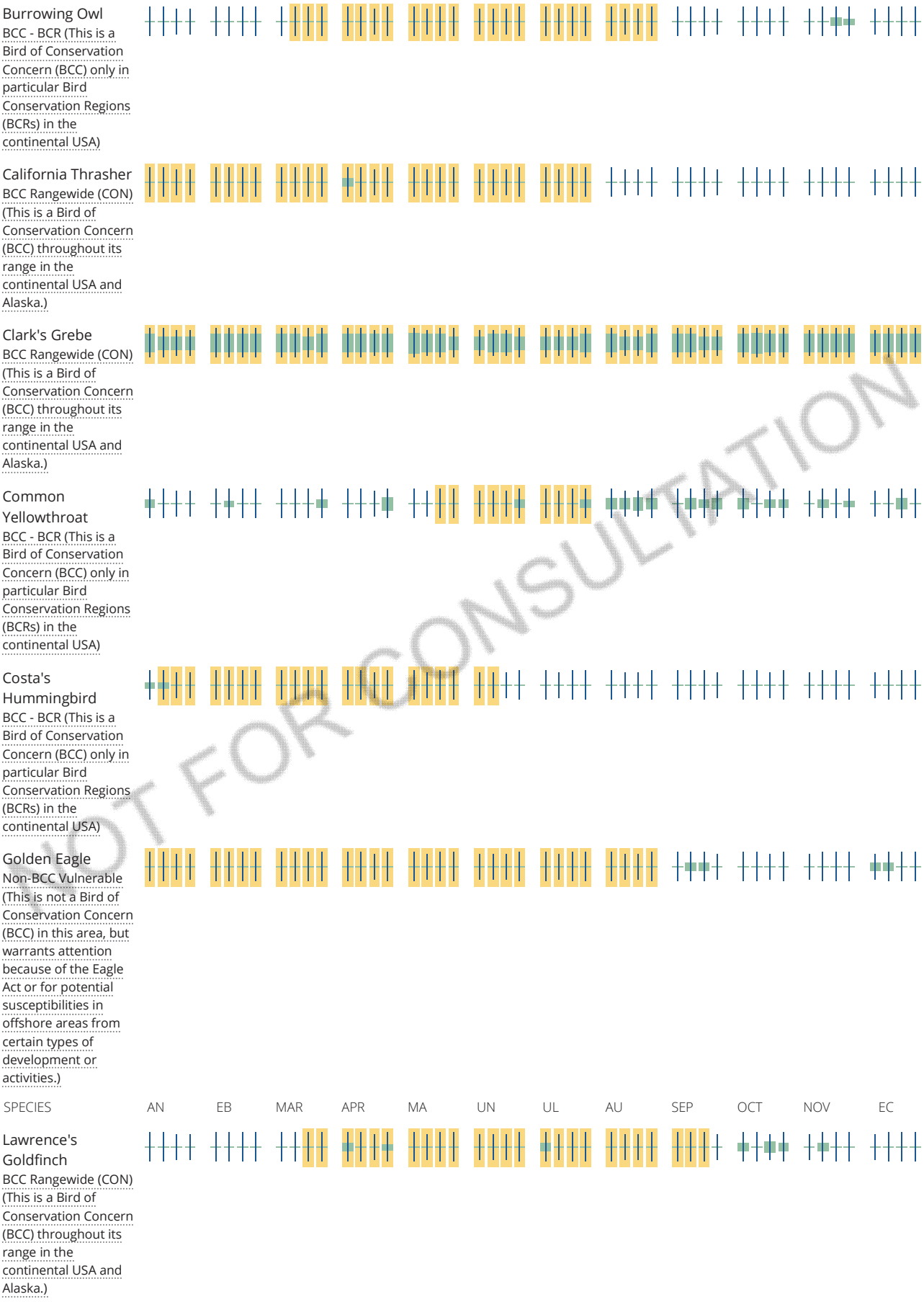
urvey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

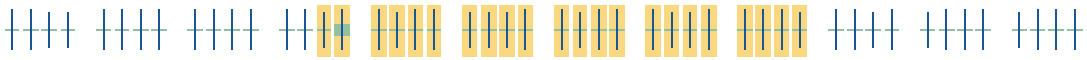


DRAFT FOR CONSULTATION



NOT FOR CONSULTATION

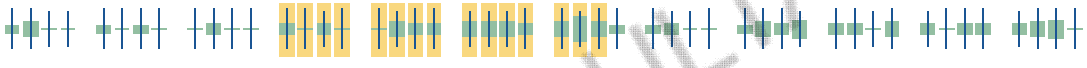
Lewis's Woodpecker
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



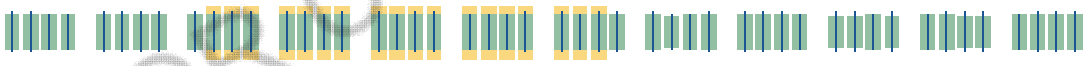
Long-billed Curlew
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Marbled Godwit
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Nuttall's Woodpecker
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



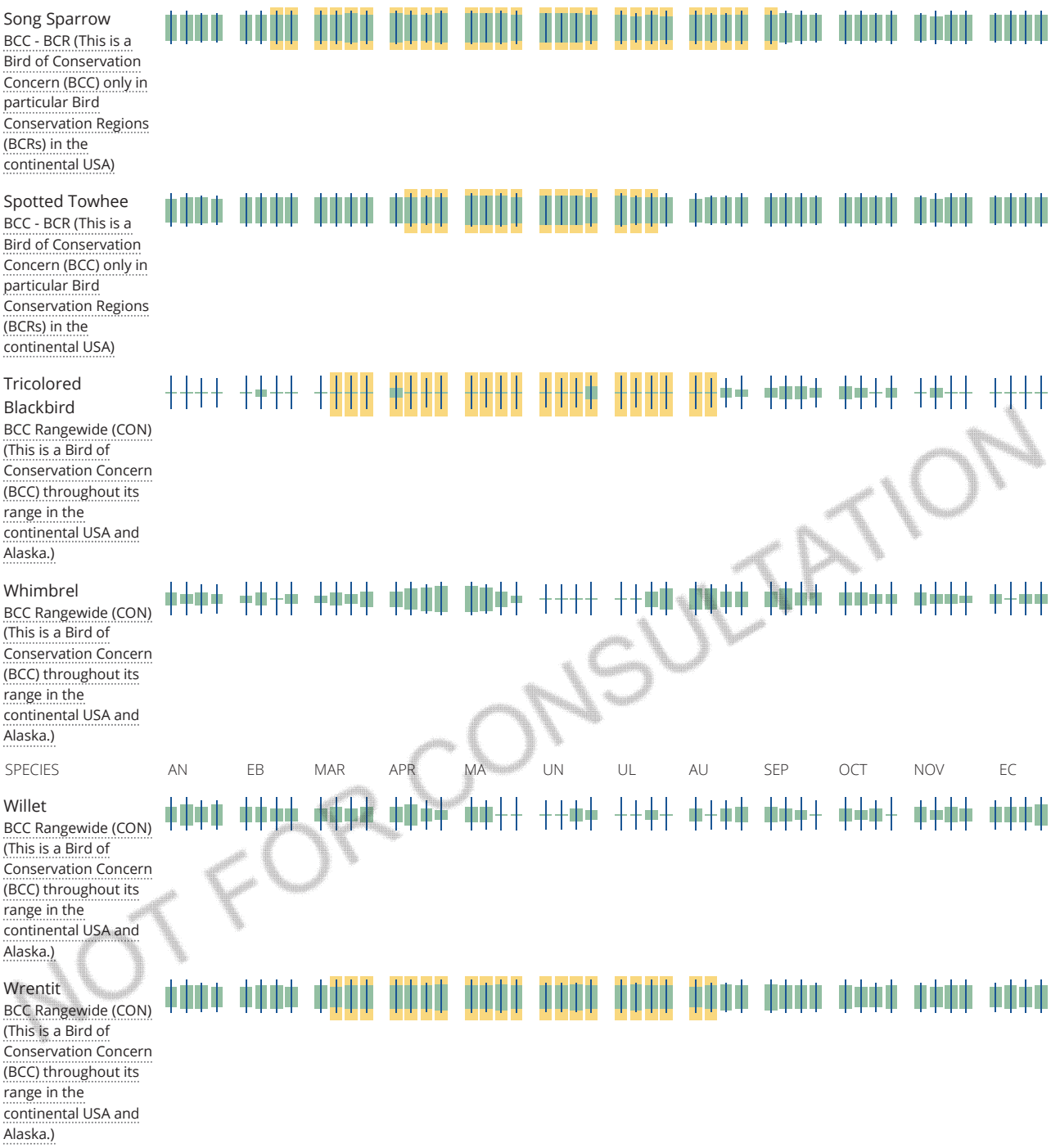
Oak Titmouse
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Rufous Hummingbird
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Short-billed Dowitcher
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

NOT FOR CONSULTATION



NOT FOR CONSULTATION

Tell me more a out conservation measures can implement to avoid or minimi e impacts to mi ratory irds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

hat does a use to enerate the mi ratory irds potentially occurrin in my specified location

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian nowledge Network (A N). The A N data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the E-bird Explore Data Tool.

hat does a use to enerate the pro a ility of presence raphs for the mi ratory irds potentially occurrin in my specified location

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian nowledge Network (A N). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

o do no if a ird is reedin interin mi ratin or present year round in my project area

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

hat are the levels of concern for mi ratory irds

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

etails a out irds that are potentially affected y offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review.

NOT FOR CONSULTATION

Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

hat if have ea les on my list

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

roper nterpretation and se of our Mi ratory ird eport

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ What does IPaC use to generate the migratory birds potentially occurring in my specified location . Please be aware this report provides the probability of presence of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the no data indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds at the bottom of your migratory bird trust resources page.

NOT FOR CONSULTATION

acilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO RE U E LAN S AT THIS LOCATION.

Fish hatcheries

THERE ARE NO ISH HATCHERIES AT THIS LOCATION.

etlands in the National etlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

RESH ATER ORESTE SHRUB ETLAN
PFOA

A full description for each wetland code can be found at the National Wetlands Inventory website

ata limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

ata e clusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

ata precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

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Appendix D

2019 Stormwater Pipeline Focused Botanical Report

1630 SAN PABLO AVENUE, SUITE 300
OAKLAND, CALIFORNIA 94612
T 510.601.2500 F 510.601.2501

November 22, 2019 11244-07

Candice Bigley
Project Manager
PMB | Advancing Healthcare Real Estate
3394 Carmel Mountain Road, Suite 200
San Diego, California 92121

Subject: Results of Special-Status Plant Survey for the Proposed Rodeo Creek Gulch Storm Drain Project, Santa Cruz County, California

Dear Ms. Bigley:

This report documents the findings of focused, special-status plant surveys that were conducted by Dudek along three alternative alignments of a new storm water pipeline between Chanticleer Avenue and Mattison Lane that terminates at outfalls just west of Rode Creek Gulch within the County of Santa Cruz, California (see Figure 1). The survey was completed to determine the presence of any special-status plant species. For the purposes of this report, special-status plant species are defined as follows:

- Plant species that are listed, formally proposed, or designated as candidates for listing as threatened or endangered under the federal Endangered Species Act;
- Plant species that are listed or designated as candidates for listing as rare, threatened, or endangered under the California Endangered Species Act;
- Plant species assigned to California Rare Plant Ranks 1A, 1B, and 2;
- Plant species that meet the definition of rare, threatened, or endangered under Section 15380 of the California Environmental Quality Act guidelines; and/or
- Plant species that are considered to be a taxon of special concern by local agencies.

1 Study Area Location and Description

The proposed storm drain would be installed along the westbound lane of Soquel Avenue and would terminate at an outlet along the west bank of Rodeo Gulch. Dudek evaluated the anticipated impact area, plus a 300-foot buffer totaling approximately 32.69 acres (“the study area”; see Figure 1). The study area is approximately 1.25 miles from the Pacific Ocean and is not within the California coastal zone.

The study area consists of a highly disturbed and previously developed parcel in an urbanized setting. The surrounding area is substantially developed and is dominated by commercial land uses, streets, and parking lots. The study area primarily supports ruderal and ornamental plant species bordering riparian oak woodland. Elevations range from approximately 50 to 100 feet above mean sea level (AMSL).

The study area is located in Section 9 of Township 11 South, Range 1 West, of the Soquel, California 7.5-minute U.S. Geological Survey quadrangle (Figure 1). The study area includes the construction footprint associated with the installation of a new storm drain extending from Assessor’s Parcel Number 029-021-47 (between Chanticleer Avenue and Mattison Lane; Soquel Property), along Soquel Avenue, and terminating within the west bank of Rodeo Creek Gulch.

2 Existing Conditions

The study area is characterized by the following vegetation communities and land covers: developed, disturbed annual grassland, and riparian oak woodland along Rodeo Creek Gulch (see Figure 2). The developed land cover type includes transportation routes, parking lots, and commercial land that supports very limited ornamental tree and shrub plantings along Soquel Avenue and the commercial parcels to the south. Disturbed annual grassland is limited to a narrow strip along the west side of Rodeo Creek Gulch. This vegetation community is composed of ruderal and non-native species including bur clover (*Medicago polymorpha*), Harding grass (*Phalaris* sp.), perennial rye grass (*Festuca perennis*), soft brome (*Bromus hordeaceus*), wild oat (*Avena fatua*), wild radish (*Raphanus raphanistrum*), and a few other herbaceous species commonly found in heavily disturbed areas. The riparian oak woodland spans the width of the gently sloping grades along Rodeo Creek Gulch. This natural woodland community was characterized by a dense overstory of mature coast live oak (Quercus agrifolia) trees with some arroyo willow (*Salix lasiolepis*) and California bay (*Umbellularia californica*). The understory consisted of a mix of shrubs, vines, and herbaceous species, including California blackberry (*Rubus ursinus*), curly doc (*Rumex crispus*), English ivy (*Hedera helix*), narrow-leaf plantain (*Plantago lanceolata*), and poison oak (*Toxicodendron diversilobum*).

3 Methods

Focused special-status plant surveys were conducted on May 22 and June 20, 2019 by Dudek botanist Lasthenia Michele Lee. The timing of the surveys coincided with the blooming period for all target species during at least one survey pass. All surveys were conducted during daylight hours under weather conditions that did not preclude observation of special-status plant species (e.g., surveys were not conducted during heavy fog or rain). The surveys were floristic in nature and consisted of walking meandering transects through all accessible portions of the study area and documenting all plant species encountered. The surveys followed recommended methodology described in the *CNPS Botanical Survey Guidelines* (CNPS 2001), the *Protocols for Surveying and Evaluating Impacts to Special-status Native Plant Populations and Natural Communities* (CDFW 2009), and the *Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants* (USFWS 2000). All plant species observed within the study area were identified to the lowest taxonomic level to determine rarity. Species identified during the survey were recorded for inclusion within a plant compendium (Attachment A). Latin and common names for plant species with a California Rare Plant Rank (CRPR) follow the *Inventory of Rare, Threatened, and Endangered Plants of California* (CNPS 2019). For plant species without a CRPR, Latin names follow the *Jepson eFlora* (Jepson Flora Project 2019), and common names follow the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service Plants Database (USDA 2019).

Based on the results of Dudek's previous habitat assessment, two special-status plant species were determined to have at least a moderate potential to occur within the study area. These species were the focus of the surveys and include those summarized in Table 1.

Table 1 – Target Special-Status Plant Species

Scientific Name	Common Name	Status (Federal/State/CRPR)
Holocarpha macradenia	Santa Cruz tarplant	FT/SE/1B.1
Pentachaeta bellidiflora	white-rayed pentachaeta	FE/SE/1B.1

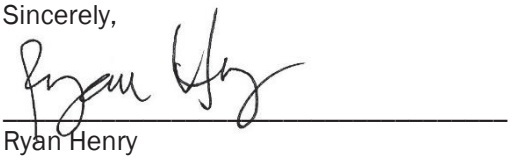
Source: CNPS 2019, CDFW 2019

4 Survey Results

A total of 74 species of native or naturalized plants — 27 native (36%) and 47 non-native (64%) — were recorded within the survey area. All species observed within the study area are included in Attachment A. No special-status plant species were identified within the study area during the surveys. The surveys were conducted at a time when target special-status plant species would be evident and identifiable. Although the California annual grassland may provide potentially suitable habitat for special-status species, the cover of nonnative grasses onsite was so great that it is unlikely these native plants can compete.

Please contact me at rhenry@dudek.com, or 510.601.2518 if there are any questions or concerns regarding the information presented herein.

Sincerely,



Ryan Henry
Senior Biologist/Project Manager

Att.: Figure 1 – Project Location
Figure 2 – Proposed Project and Environmental Setting
A – Plant Species Observed within the Study Area
Cc: Stephanie Strelow, Dudek

References Cited

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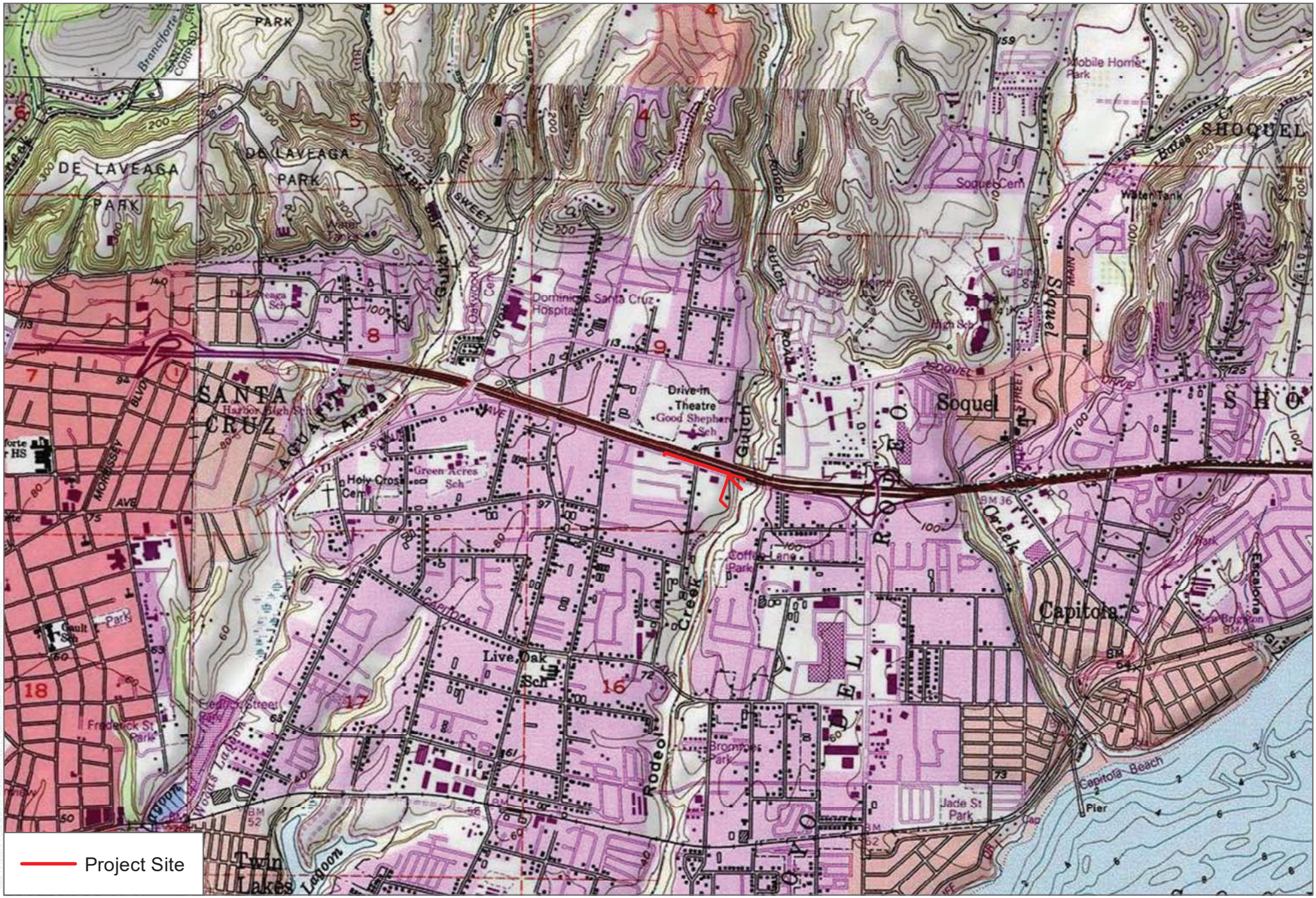

SOURCE: USGS, 2018

DUDEK

0 1,000 2,000 Feet

FIGURE 1

Project Location

Rodeo Gulch Storm Drain Project

SOURCE: NHD, 2018
ESRI, 2018

DUDEK

0 100 200 Feet

FIGURE 2

Proposed Project and Environmental Setting

Rodeo Gulch Storm Drain Project

Attachment A

Plant Species Observed within the Study Area

EUDICOTS

VASCULAR SPECIES

ANACARDIACEAE—SUMAC OR CASHEW FAMILY

Toxicodendron diversilobum—poison oak

APIACEAE—CARROT FAMILY

Conium maculatum—poison hemlock*
Foeniculum vulgare—fennel*
Oenanthe sarmentosa—water-parsley
Torilis arvensis—spreading hedgeparsley*

ARALIACEAE—GINSENG FAMILY

Hedera helix—English ivy*

ASTERACEAE—SUNFLOWER FAMILY

Baccharis pilularis—coyote brush
Carduus pycnocephalus—Italian plumeless thistle*
Cirsium vulgare—bull thistle*
Hypochaeris glabra—smooth cat's ear*
Hypochaeris radicata—hairy cat's ear*
Silybum marianum—blessed milkthistle*
Sonchus oleraceus—common sowthistle*

BRASSICACEAE—MUSTARD FAMILY

Raphanus raphanistrum—wild radish*
Raphanus sativus—cultivated radish*

CAPRIFOLIACEAE—HONEYSUCKLE FAMILY

Symphoricarpos albus var. *laevigatus*—common snowberry

CONVOLVULACEAE—MORNING-GLORY FAMILY

Convolvulus arvensis—field bindweed*

CORNACEAE—DOGWOOD FAMILY

Cornus canadensis—bunchberry

FABACEAE—LEGUME FAMILY

Acmispon americanus—Spanish clover
Cytisus scoparius—broom*
Genista monspessulana—French broom*

Lotus corniculatus—bird's-foot trefoil*
Medicago polymorpha—burclover*
Trifolium angustifolium—narrowleaf crimson clover*
Vicia sativa—garden vetch*
Vicia villosa—winter vetch*

FAGACEAE—OAK FAMILY

Quercus agrifolia var. *agrifolia*—coast live oak
Quercus agrifolia—coast live oak

GERANIACEAE—GERANIUM FAMILY

Geranium dissectum—cutleaf geranium*

LAURACEAE—LAUREL FAMILY

Umbellularia californica—California bay

MYRSINACEAE—MYRSINE FAMILY

Lysimachia arvensis—scarlet pimpernel*

MYRTACEAE—MYRTLE FAMILY

Eucalyptus globulus—Tasmanian bluegum*

PAPAVERACEAE—POPPY FAMILY

Eschscholzia californica—California poppy

PLANTAGINACEAE—PLANTAIN FAMILY

Plantago lanceolata—narrowleaf plantain*

PLATANACEAE—PLANE TREE, SYCAMORE FAMILY

Platanus racemosa—California sycamore

POLYGONACEAE—BUCKWHEAT FAMILY

Rumex acetosella—common sheep sorrel*
Rumex crispus—curly dock*
Rumex pulcher—fiddle dock*

ROSACEAE—ROSE FAMILY

Rubus armeniacus—Himalayan blackberry*
Rubus ursinus—California blackberry

RUBIACEAE—MADDER FAMILY

Galium aparine—stickywilly

SALICACEAE—WILLOW FAMILY

Salix laevigata—red willow
Salix lasiolepis—arroyo willow

URTICACEAE—NETTLE FAMILY

Urtica dioica—stinging nettle

GYMNOSPERMS AND GNETOPHYTES

VASCULAR SPECIES

CUPRESSACEAE—CYPRESS FAMILY

Sequoia sempervirens—redwood

MONOCOTS

VASCULAR SPECIES

ARACEAE—ARUM FAMILY

Lemna minor—common duckweed
Zantedeschia aethiopica—calla lily*

CYPERACEAE—SEDGE FAMILY

Cyperus eragrostis—tall flatsedge

JUNCACEAE—RUSH FAMILY

Juncus mexicanus—Mexican rush
Juncus patens—western rush

ORCHIDACEAE—ORCHID FAMILY

Epipactis helleborine—broadleaf helleborine*

POACEAE—GRASS FAMILY

Avena barbata—slender oat*
Avena fatua—wild oat*
Briza minor—little quakinggrass*
Bromus carinatus—California brome
Bromus diandrus—ripgut brome*
Bromus hordeaceus—soft brome*
Bromus laevipes—Chinook brome
Cynodon dactylon—Bermudagrass*
Danthonia californica—California oat grass

Elymus condensatus—giant wild rye
Elymus glaucus—blue wildrye
Festuca bromoides—brome fescue*
Festuca perennis—perennial rye grass*
Holcus lanatus—common velvet grass*
Hordeum murinum ssp. *leporinum*—hare barley*
Phalaris aquatica—Harding grass*
Stipa pulchra—purple needlegrass

* signifies introduced (non-native) species

Appendix E

2019 Stormwater Pipeline Aquatic Resources Delineation

725 FRONT STREET, SUITE 400
SANTA CRUZ, CALIFORNIA 95060
T 831.600.1400 F 831.600.1401

November 22, 2019 11244-06

Candice Bigley
Project Manager
PMB | Advancing Healthcare Real Estate
3394 Carmel Mountain Road, Suite 200
San Diego, California 92121

Subject: Jurisdictional Delineation Report for the Proposed Rodeo Creek Gulch Storm Drain Project, Santa Cruz County, California

Dear Ms. Bigley:

This report presents the findings of a jurisdictional delineation of aquatic resources conducted by Dudek along three alternative alignments of a new storm water pipeline between Chanticleer Avenue and Mattison Lane and terminate at outfalls just west of Rode Creek Gulch within the City of Santa Cruz (the project site). The purpose of this investigation was to evaluate the presence and extent of aquatic resources that may be subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and/or the California Department of Fish and Wildlife (CDFW). The investigation included an analysis of Rodeo Creek Gulch, into which the proposed storm water drainage outlet would flow.

This report is intended to satisfy formal documentation according to the delineation guidelines and protocols stipulated by the USACE under Section 404 of the federal Clean Water Act (CWA), and the CDFW under Section 1600-1607 of the California Fish and Game Code.

1 Study Area Location and Description

The proposed storm drain would be installed along the westbound lane of Soquel Avenue and would terminate at an outlet along the west bank of Rodeo Gulch. Dudek evaluated the anticipated impact area, plus a 300-foot buffer totaling approximately 32.69 acres (“the study area”) (Figure 1). The study area is approximately 1.25 miles from the Pacific Ocean and is not within the California coastal zone.

The study area consists of a highly disturbed and previously developed parcel in an urbanized setting. The surrounding area is substantially developed and is dominated by commercial land uses, streets, and parking lots. The study area primarily supports ruderal and ornamental plant species bordering riparian oak woodland. Elevations range from approximately 50 to 100 feet above mean sea level (AMSL).

The study area is located in Section 9 of Township 11 South, Range 1 West, of the Soquel, California 7.5-minute U.S. Geological Survey quadrangle (Figure 1). The project site includes the construction footprint associated with the installation of a new storm drain extending from Assessor’s Parcel Number 029-021-47 (between Chanticleer Avenue and Mattison Lane; Soquel Property), along Soquel Avenue, and terminating within the west bank of Rodeo Creek Gulch.

2 Summary of Regulations

There are three key agencies that regulate activities within inland streams, wetlands, and riparian areas in California. The USACE Regulatory Program regulates activities pursuant to Section 404 of the CWA; the CDFW regulates activities under the Fish and Game Code Sections 1600–1616; and the RWQCB regulates activities under Section 401 of the CWA and the Porter–Cologne Water Quality Control Act (Porter–Cologne Act).

The USACE regulates "discharge of dredged or fill material" into "waters of the United States," which includes tidal waters, interstate waters, and all other waters that are part of a tributary system to interstate waters or to navigable "waters of the United States," the use, degradation, or destruction of which could affect interstate or foreign commerce or which are tributaries to waters subject to the ebb and flow of the tide (33 CFR, Part 328.3(a)), pursuant to provisions of Section 404 of the CWA. The USACE generally takes jurisdiction within rivers and streams to the "ordinary high water mark" (OHWM) determined by erosion, the deposition of vegetation or debris, and changes in vegetation. The USACE defines jurisdictional wetlands as areas that contain hydrophytic vegetation, hydric soils, and wetland hydrology, in accordance with the procedures established in the Corps Wetland Delineation Manual (USACE 1987) and Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (USACE 2010). The EPA and USACE published a final rule (33 CFR, Part 328) defining the scope of waters protected under the CWA in response to several U.S. Supreme Court rulings including the U.S. v. Riverside Bayview Homes, 474 U.S. 121 (1985; Riverside); Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers, 531 U.S. 159 (2001; SWANCC); and Rapanos v. United States, 547 U.S. 715 (2006; Rapanos). As a result of the final rule, EPA and USACE agencies define "waters of the United States" to include eight categories of jurisdictional waters: traditional navigable waters (TNW), interstate waters, territorial seas, impoundments of jurisdictional waters, tributary waters, adjacent waters, case-by-case determination that require a significant nexus (combined), and case-by-case determination that requires a significant nexus (individually).

In accordance with Section 1600 et seq. of the California Fish and Game Code (Streambed Alteration), the CDFW regulates activities which "will substantially divert, obstruct, or substantially change the natural flow or bed, channel or bank, of any river, stream, or lake designated by the Department in which there is at any time an existing fish or wildlife resource or from which these resources derive benefit." The CDFW takes jurisdiction to the top of bank of the stream, or the limit of the adjacent riparian vegetation, referred to in this report as "streambed and associated riparian habitats." Applications to the CDFW must include a complete certified California Environmental Quality Act (CEQA) document.

The RWQCB regulates "discharging waste, or proposing to discharge waste, within any region that could affect the water of the state" (Water Code Section 13260 (a)), pursuant to provisions of the Porter–Cologne Act. "Waters of the State" are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (Water Code Section 13050 (e)). Before the USACE will issue a CWA Section 404 permit, applicants must receive a CWA Section 401 Water Quality Certification from the RWQCB. If a CWA Section 404 permit is not required for the project, the RWQCB may still require a permit (i.e., Waste Discharge Requirement) under the Porter–Cologne Act. Applications to the RWQCB must include a complete certified CEQA document.

3 Methods

Data regarding aquatic resources present within the study area were obtained through a review of pertinent literature and field assessment; both are described in detail below.

3.1 Literature Review

Prior to visiting the study area, potential and/or historic drainages and aquatic features were investigated based on a review of the following: USGS topographic maps (1:24,000 scale), aerial photographs, the National Wetland Inventory (NWI) database (USFWS 2016), and the Natural Resource Conservation Service (NRCS) Web Soil Survey (2015). In addition, hydrologic information from gauge stations within the vicinity of the study area was obtained.

3.2 Jurisdictional Delineation – Field Assessment

Following the initial data collection, Dudek biologists Sheldon Leiker and Lasthenia Michele Lee performed a formal (routine) wetlands delineation within the study area on May 22, 2019. All areas that were identified as being potentially subject to the jurisdiction of the USACE, RWQCB, and CDFW were field verified and mapped.

The USACE wetlands delineation was performed in accordance with the Corps Wetlands Delineation Manual (USACE 1987), Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (USACE 2010), A Guide to Ordinary High Water Mark (OHWM) Delineation for Non-Perennial Streams in the Western Mountains, Valleys, and Coast Region of the United States (Mersel and Lichvar 2014), and recent changes to 33 CFR, Part 328 provided by the USACE and EPA on the geographic extent of jurisdiction based on the U.S. Supreme Court's interpretation of the CWA. Non-wetland waters of the United States were delineated based on the limits of an OHWM. During the jurisdictional delineation, drainage features were examined for evidence of an OHWM, saturation, permanence of surface water, wetland vegetation, and nexus to a traditional navigable water of the United States. If any of these criteria were met, transects were run to determine the extent of each regulatory agency's jurisdiction.

Transects were taken approximately every 300 feet or greater if streambed conditions were unchanged. Data on transect widths, dominant vegetation present within the drainage and in the adjacent uplands, and channel morphology were recorded on field forms. In areas where USACE jurisdictional wetlands were suspected, data on vegetation, hydrology, and soils were collected along transects.

Areas regulated by the RWQCB are generally coincident with the USACE, but include features isolated from navigable waters of the United States that have evidence of surface water inundation. The CDFW jurisdiction was defined to the bank of the stream/channels or to the limit of the adjacent riparian vegetation.

Drainage features were mapped during the field observation to obtain characteristic parameters and detailed descriptions using standard measurement tools. The location of transects, upstream and downstream extents of each feature, and sample points were collected in the field using a 1:2,400 scale (1 inch = 200 feet) aerial photograph, topographic base, and Global Positioning System (GPS) equipment with sub-meter accuracy. Dudek geographic information system (GIS) technician Curtis Battle digitized the jurisdictional extents based on the GPS data and transect width measurements into a project-specific GIS using ArcGIS software.

4 Results

Dudek used the methods described above to determine the presence or absence of USACE, RWQCB, and CDFW jurisdiction within the study area. One main drainage, Rodeo Creek Gulch, was investigated within the study area as a potential jurisdictional resource. The determination of aquatic resource jurisdiction within the study area was supported by information obtained from the USGS topographic map, Web Soil Survey, USFWS NWI map, and field assessment. Information obtained from each source is described below.

4.1 USGS Topographic and Watershed Map Review

The USGS 7.5-minute Soquel, California topographic map (1994) was utilized to identify natural and man-made features occurring within the vicinity of the study area. Information obtained from the map included contour lines, streets, streams, railroad lines, and vegetation. The Soquel map was based on 1954 aerial photography that was photorevised in 1994. The study area was generally mapped as undeveloped land with a few buildings in the northwestern portion of the study area. Soquel Avenue and California State Route 1 are directly to the north of the study area crossing Rodeo Creek Gulch. The main stem of Rodeo Creek runs along the eastern edge of the study area. No other aquatic features or significant structural features are identified on the map within the study area's boundaries.

The study area occurs within the Aptos-Soquel Subarea (403.13) of the Santa Cruz Hydrologic Area (403.10), which occurs within the larger Big Basin Hydrologic Unit (CCRWQCB 2019; Figure 2). According to the USGS, the project site occurs within the Arana Gulch-Rodeo sub-watershed of the Soquel Creek – Frontal Monterey Bay (HUC10-1806000103) watershed and larger San Lorenzo – Soquel watershed (USGS HUC8: 18060001).

The study area is part of the (San Lorenzo - Soquel) Hydrologic Unit Code 18060001. The hydrology of the site has been influenced by anthropogenic sources including the Hwy 1 and Soquel Ave and adjacent residential and commercial developments. Sources of hydrology in the study area include precipitation and runoff from the adjacent mountain slopes and impervious surfaces such as roadways and parking lots. Rodeo Creek is approximately 4 miles long. It begins near 1750 North Rodeo Gulch Road and flows through Rodeo Creek Gulch southward into Corcoran Lagoon.

4.2 Soil Survey Review

The U.S. Department of Agriculture, NRCS's Web Soil Survey for Santa Cruz County, California (2019) was consulted and identified three soil associations as occurring throughout the study area: the Lompico-Felton complex, 30 to 50 percent slopes, MLRA 4B; Watsonville loam, 2 to 15 percent slopes; Aquents, flooded. Each of these soil types is described in further detail, below. A map of the soils within the study area can be found in Figure 3 of this report.

Lompico-Felton complex, 30 to 50 percent slopes: The soils of the Lompico-Felton complex occur on mountain slopes and ridges. This soil is not very deep with a restrictive bedrock layer between 20 to 40 inches and is very well drained. Lompico-Felton complex soils are well drained and have moderately slow subsoil permeability. Lompico-Felton complex soil is not listed as hydric (USDA 2019).

Watsonville loam, 2 to 15 percent slopes: Watsonville loam soils occur primarily on marine terraces. The soil is relatively shallow and reaches a restrictive layer of an abrupt textural change about 18 inches below ground surface.

Watsonville loam soils are somewhat poorly drained with an alluvium parent material. Watsonville loam soils are listed as hydric (USDA 2019).

Aquents, flooded: Aquents are wet entisols which typically occur on recent alluvial plains, beaches, and valleys or on steep slopes where erosion is rapid. The depth to the water table is typically between 10 to 39 inches and the soils are poorly drained. Aquents are listed as hydric (USDA 2019).

4.3 National Wetlands Inventory Review

The National Wetlands Inventory identifies much of the site as Palustrine Forested wetland that is temporarily flooded (PFOA) which is comprised of Freshwater Forested/Shrub Wetland (Figure 3). This system encompasses all nontidal wetlands dominated by woody vegetation that is 20 feet or taller including woody wetlands, forested swamp, and shrub bogs.

4.4 Field Assessment

A portion of the Rodeo Creek Gulch and its adjacent wetland were investigated within the eastern portion of the study area during this assessment. Rodeo Creek Gulch is a natural drainage that supports perennial flows and originates near Rodeo Creek Gulch Road in the Santa Cruz Mountains. From its headwaters, the drainage continues for approximately 4 miles in a southerly direction before it empties into the Corcoran Lagoon. The mainstem and active channel of the drainage (including the OHWM) occurs just to the east of the study area. However, the western portion of the riparian canopy and an adjacent wetland occur within the study area and were the focus of this jurisdictional delineation. Figure 4 illustrates the location and extent of jurisdiction within the study area, and Table 1 summarizes the amount of jurisdiction calculated within the study area.

Table 1. Summary of Jurisdictional Features

Feature	Width (feet)		Area (acres)		Nature
	USACE	RWQCB/CDFW	USACE	RWQCB/CDFW	
Rodeo Gulch Creek*	26-130	10-385	2.82	7.61	Perennial
Total			**2.82**	**7.61**	

* Adjacent wetland is located within the Rodeo Creek Gulch system

The following descriptions are detailed accounts of the potentially jurisdictional features investigated within the study area. The wetland indicator status was assigned to each species using the National Wetland Plant List (California) (Lichvar et al. 2016), as shown in Table 1. The wetland indicator status of each plant species observed within the OHWM is provided for easy reference (Table 2).

Table 2. Summary of Wetland Indicator Status

Category	Probability
Obligate Wetland (OBL)	Almost always occur in wetlands (estimated probability of >99%)
Facultative Wetland (FACW)	Usually occur in wetlands (estimated probability of 67% to 99%)
Facultative (FAC)	Equally likely to occur in wetlands/non-wetlands (estimated probability of 34% to 66%)
Facultative Upland (FACU)	Usually occur in non-wetlands (estimated probability 67% to 99%)
Obligate Upland (UPL)	Almost always occur in non-wetlands (estimated probability >99%)
No Indicator (NI)	—

Rodeo Creek Gulch

The riparian canopy of Rodeo Creek Gulch within the study area is characterized by a dense oak woodland vegetation community that transitions from an active streambed terrace to a gently sloping bank. Dominant species that characterized the overstory included coast live oak (*Quercus agrifolia*), California bay (*Umbellularia californica*), red willow (*Salix laevigata*), and arroyo willow (*Salix lasiolepis*). The shrub layer was dominated by willows, poison oak (*Toxicodendron diversilobum*), Himalayan blackberry (*Rubus armeniacus*), California blackberry (*Rubus ursinus*), and snowberry (*Symphoricarpos* spp); and the herbaceous layer included water-parsley (*Oenanthe sarmentosa*), curly dock (*Rumex crispus*), smartweed (*Polygonum* spp), Mexican rush (*Juncus mexicanus*), and stinging nettle (*Urtica dioica*). Species within the adjacent uplands included giant wild rye (*Elymus condensatus*), perennial rye grass (*Festuca perennis*), soft brome (*Bromus hordeaceus*), wild oat (*Avena fatua*), Harding grass (*Phalaris aquatic*), Maltese star-thistle (*Centaurea melitensis*), smooth cat's ear (*Hypochaeris glabra*), wild radish (*Raphanus raphanistrum*), coast live oak, Tasmanian bluegum (*Eucalyptus globulus*), and English ivy (*Hedera helix*). Representative photographs of the drainage are provided in Attachment B.

The CDFW and RWQCB jurisdictional width encompassed the lateral extent of the oak woodland canopy within the study area and ranged from 10 to 385 feet. A total of 7.61 acres of CDFW and RWQCB jurisdiction, all of which would be considered state wetlands, occur within the study area.

Adjacent Wetland

The western bank of Rodeo Creek Gulch within the study area supported an active streambed terrace that contained a seasonally ponded, adjacent wetland. Approximately 4 to 6 inches of surface water were observed within this local depressional area. Plant species that dominated the perimeter of the ponded area included water-parsley (OBL), curly dock (FAC), smartweed (OBL/FACW), Mexican rush (FACW), stinging nettle (FAC) red and arroyo willow saplings (FACW), poison oak (FACU), Himalayan blackberry (FAC), California blackberry (FAC), and snowberry (FAC).

Due to the dominance of hydrophytic vegetation and surface water hydrology along the western stream terrace of Rodeo Creek Gulch, two data stations were established to determine the extent of federal jurisdictional wetlands (Attachment A; Data Sheets #1-2). Two soil pits were excavated onsite. The first soil pit (1a) was located near the edge of hydrophytic vegetation where the soil was somewhat saturated, and the second soil pit (1b) was located upslope of the first in an area with dry soil and upland vegetation. Soil within test pit 1a consisted of a muck layer on the surface with loam from 1-17 inches below ground surface (refusal at water table) with a color od 10YR 4/1

in the Munsell (2009) Soil Charts (Data Sheet 1a). This soil meets the definition of hydric soils and therefore met the USACE definition of a jurisdictional wetland. Soil within test pit 1b consisted of silt loam from 0-20 inches below ground surface with a color 10YR 3/1 on the Munsell (2009) Soil Charts (Data Sheet 1b). This soil does not meet the definition of hydric soils signifying the end of the wetland at the edge of the hydropytic vegetation. Federal jurisdictional wetlands were determined present whenever there was a dominance of hydrophytic vegetation within the study area. Areas along Rodeo Creek Gulch that were determined to meet the USACE three-parameter test for classification as a wetland total approximately 2.82 acres of wetland.

5 Conclusion

The purpose of this report is to identify and delineate all jurisdictional wetland and non-wetland waters of the United States, and jurisdictional streambeds as regulated by the USACE, RWQCB, and CDFW within the study area. This report represents existing conditions only, and does not address any activities proposed within the study area. Information contained within this report will be utilized to determine the location and extent of possible jurisdictional impacts associated with any future maintenance or development proposed within the study area.

The study area supports the riparian canopy of one perennial drainage (Rodeo Creek Gulch) and one adjacent federal wetland. In total, the study area contains 2.82 acres of USACE jurisdictional wetlands and 7.61 acres of CDFW and RWQCB jurisdictional streambed and associated riparian habitat, all of which would be considered state wetlands. The USACE jurisdiction overlaps and is a subset of the CDFW acreage. However, final determinations of jurisdictional extents cannot be made until the resource agencies have verified the findings of this investigation.

Any proposal that involves impacting jurisdictional drainages within the study area through filling, stockpiling, conversion to a storm drain, channelization, bank stabilization, road or utility line crossings, maintenance, or any other modification would require permits from the USACE, the RWQCB, and the CDFW before any earth-moving activities could commence. Both permanent and temporary impacts are regulated and would trigger the need for these permits. Processing of the RWQCB's CWA Section 401 and CDFW's Fish and Game Code Section 1600 permits can occur concurrently with the USACE's CWA Section 404 permit process and can utilize the same information and analysis. The USACE will not issue its authorization until the RWQCB completes the CWA Section 401 permit.

If you have any questions regarding the contents of this report, please call me at 831.291.7448.

Sincerely,

Ryan Henry
Project Manager/Biologist

Sheldon Leiker
Project Scientist

Att.: *Figures 1–4*
A – Wetland Determination Data Forms
B – Site Photographs

cc: *Stephanie Strelow, Dudek*

6 References Cited

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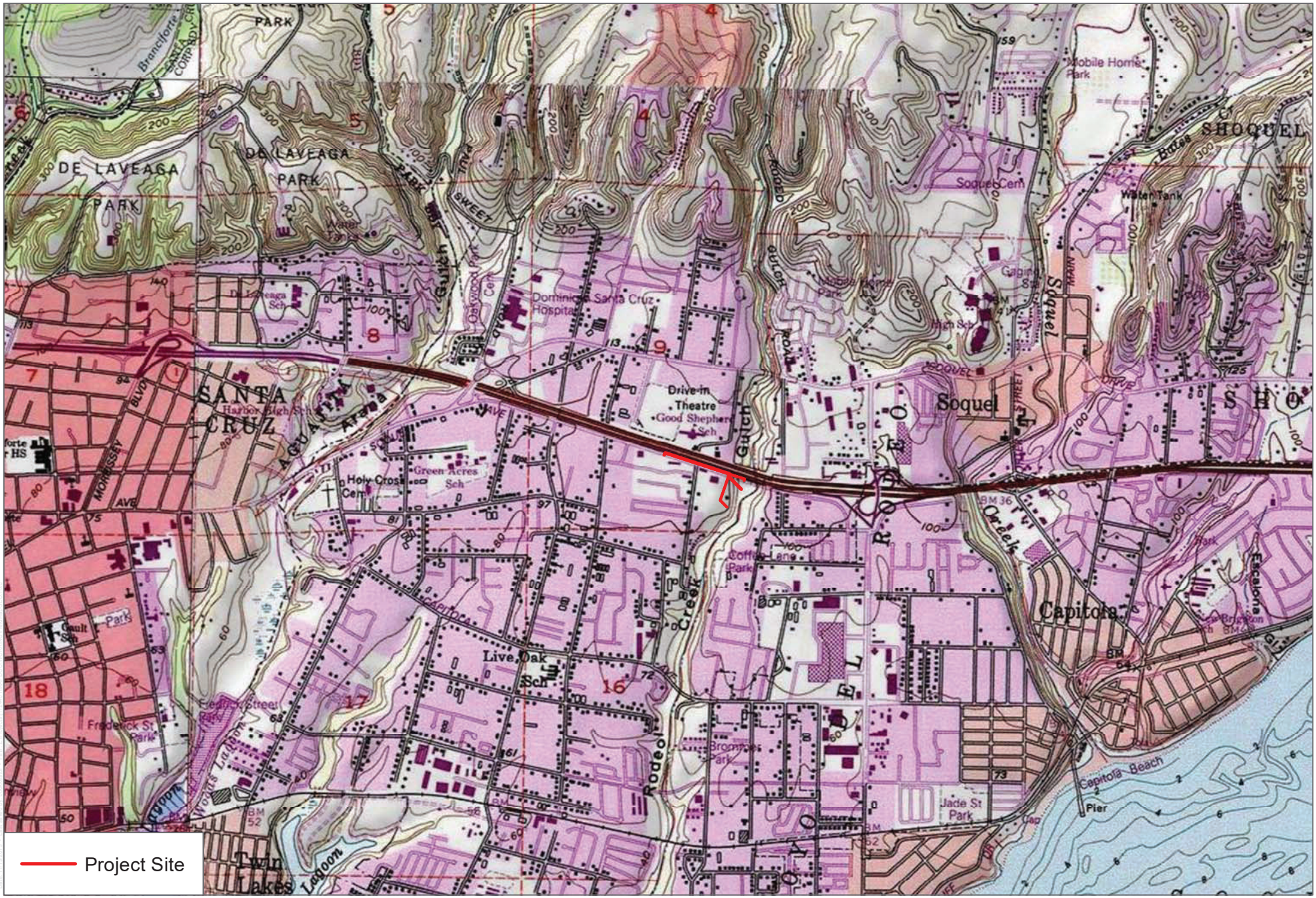

SOURCE: USGS, 2018

DUDEK

0 1,000 2,000 Feet

FIGURE 1

Project Location

Rodeo Gulch Storm Drain Project

SOURCE: ESRI, 2018
NHD, 2018
USGS, 2018

DUDEK

0 9,000 18,000 Feet

FIGURE 2

Watershed & Hydrology

Rodeo Gulch Storm Drain Project

SOURCE: ESRI 2018
USDA 2018
USFW 2018

DUDEK

0 100 200 Feet

FIGURE 3

USDA Soils and NWI

Rodeo Gulch Storm Drain Project

SOURCE: ESRI, 2018

DUDEK

0 100 200 Feet

FIGURE 4

Jurisdictional Resources

Rodeo Gulch Storm Drain Project

Attachment A

Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Rodeo Gulch/ Kaiser City/County: Santa Cruz, Ca Sampling Date: 5/22/19

Applicant/Owner: State: CA Sampling Point: 1a

Investigator(s): Sheldon Leiker Section, Township, Range:

Landform (hillslope, terrace, etc.): floodplain, terrene Local relief (concave, convex, none): concave Slope (%): 1-3

Subregion (LRR): C - Mediterranean California Lat: 36.98288 Long: -121.97172 Datum:

Soil Map Unit Name: 143—Lompico-Felton complex, 30 to 50 percent slopes, MLRA 4B NWI classification: PFOA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ○ No ○ (If no, explain in Remarks.)

Are Vegetation ☐ Soil ☐ or Hydrology ☒ significantly disturbed? Are "Normal Circumstances" present? Yes ○ No ◉

Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ◉	No ○	
Hydric Soil Present?	Yes ○	No ○	**Is the Sampled Area within a Wetland?** Yes ◉ No ○
Wetland Hydrology Present?	Yes ◉	No ○	

Remarks: Area is located adjacent to two major roadways (hwy 1/ Soquel Ave) and receives flow from the drainage outfall the runs beneath the roadway

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix lasiolepis*	10	Yes	FACW
2.			
3.			
4.			
Total Cover:	10 %		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	%		
Herb Stratum			
1. *Oenanthe sarmentosa*	60	Yes	OBL
2. *Polygonum spp*	2	No	FACW
3. *Cyperus eragrostis*	1	No	FACW
4. *Rumex crispus*	1	No	FAC
5. *grass spp*	1	No	
6.			
7.			
8.			
Total Cover:	65 %		
Woody Vine Stratum			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum 35 % % Cover of Biotic Crust %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	60	x 1 =	60
FACW species	13	x 2 =	26
FAC species	1	x 3 =	3
FACU species		x 4 =	0
UPL species		x 5 =	0
Column Totals:	74 (A)		89 (B)

Prevalence Index = B/A = 1.20

Hydrophytic Vegetation Indicators:

☒ Dominance Test is >50%

☒ Prevalence Index is ≤3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ◉ No ○

Remarks: wetland follows the oenanthe vegetation line

SOIL

Sampling Point: 1a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture[3]	Remarks
1-17	10YR 4/1	100			C	M	loam	muck layer at surface

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☒ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils:[4]

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ◯ No ◯

Remarks: hit water table

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1) (**Nonriverine**)
- ☐ Sediment Deposits (B2) (**Nonriverine**)
- ☐ Drift Deposits (B3) (**Nonriverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☒ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☒ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ◯ No ◉ Depth (inches):

Water Table Present? Yes ◉ No ◯ Depth (inches): 10.5

Saturation Present? (includes capillary fringe) Yes ◉ No ◯ Depth (inches): 6

Wetland Hydrology Present? Yes ◉ No ◯

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Rodeo Gulch/ Kaiser | City/County: Santa Cruz, Ca | Sampling Date: 5/22/19

Applicant/Owner: | State: CA | Sampling Point: 1b

Investigator(s): Sheldon Leiker | Section, Township, Range:

Landform (hillslope, terrace, etc.): hillslope | Local relief (concave, convex, none): convex | Slope (%): 10

Subregion (LRR): C - Mediterranean California | Lat: 36.98293 | Long: -121.97173 | Datum: WGS84

Soil Map Unit Name: 143—Lompico-Felton complex, 30 to 50 percent slopes, MLRA 4B | NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ○ No ○ (If no, explain in Remarks.)

Are Vegetation ☐ Soil ☐ or Hydrology ☒ significantly disturbed? Are "Normal Circumstances" present? Yes ○ No ◉

Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ○	No ◉	
Hydric Soil Present?	Yes ○	No ◉	**Is the Sampled Area within a Wetland?** Yes ○ No ◉
Wetland Hydrology Present?	Yes ○	No ◉	

Remarks: Area is located adjacent to two major roadways (hwy 1/ Soquel Ave) and receives flow from the drainage outfall the runs beneath the roadway

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus agrifolia*	25	Yes	Not Listed
2.			
3.			
4.			
Total Cover:	25 %		
Sapling/Shrub Stratum			
1. *Toxicodendron diversilobum*	10		Not Listed
2. *Rubus ursinus*	40	Yes	FACU
3. *Rubus armeniacus*	30	Yes	FACU
4.			
5.			
Total Cover:	80 %		
Herb Stratum			
1. *Symphoricarpos albus*	3	No	FACU
2. *Hedera helix*	1	No	Not Listed
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	4 %		
Woody Vine Stratum			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum 20 % | % Cover of Biotic Crust %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species		x 2 =	0
FAC species		x 3 =	0
FACU species	73	x 4 =	292
UPL species	36	x 5 =	180
Column Totals:	109 (A)		472 (B)

Prevalence Index = B/A = 4.33

Hydrophytic Vegetation Indicators:

- ◉ Dominance Test is >50%
- ◉ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ○ No ◉

Remarks:

SOIL

Sampling Point: 1b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture[3]	Remarks
1-20	10YR 3/1	100			C	M	silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils:[4]

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: roots

Depth (inches): 20

Hydric Soil Present? Yes ○ No ◉

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (**Nonriverine**)
- ☐ Sediment Deposits (B2) (**Nonriverine**)
- ☐ Drift Deposits (B3) (**Nonriverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ○ No ◉ Depth (inches):

Water Table Present? Yes ○ No ◉ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ○ No ◉ Depth (inches):

Wetland Hydrology Present? Yes ○ No ◉

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Attachment B

Rodeo Creek Gulch Site Photographs

Photo 1. CDFW jurisdictional boundary within the study area.

Photo 2. CDFW jurisdictional boundary within the study area.

Photo 3. CDFW jurisdictional boundary within the study area.

Photo 4. CDFW jurisdictional boundary within the study area.

Photo 5. Wetland within the study area.

Photo 6. Wetland within the study area.

Photo 7. Wetland within the study area.

Photo 8. Wetland within the study area.

Photo 9. Wetland within the study area.

Photo 10. Wetland within the study area.

Photo 11. Soil test pit one excavated as part of the jurisdictional delineation.

Photo 12. Soil test pit two as part of the jurisdictional delineation.

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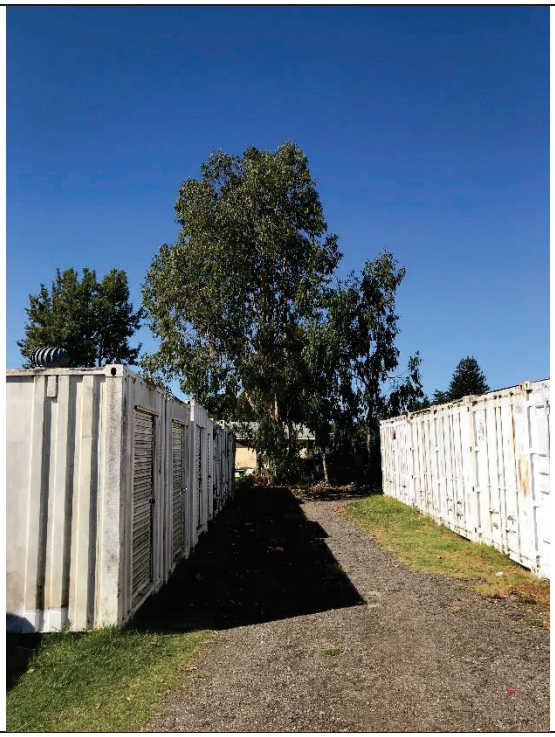
Appendix F

Site Photographs



Photograph 1: Proposed medical office building site looking west toward western parcel boundary.

Photograph 2: Proposed medical office building site at northern parcel boundary looking west along Soquel Avenue.

Photograph 3: Proposed medical office building site looking west at center of parcel.

Photograph 4: Proposed medical office building site looking south along western parcel boundary.

Photograph 5: Stormwater pipeline alignment along Soquel Avenue looking east toward Rodeo Creek Gulch (Source: Mori 2020).

Photograph 6: Disturbed annual grassland and portion of oak woodland within the vicinity of the stormwater pipeline alignment looking south (Source: Mori 2020).

Photograph 7: Understory of oak woodland south of the stormwater pipeline alignment looking west.

Photograph 8: Understory of oak woodland southeast of stormwater pipeline outlet looking northeast toward adjacent wetland associated with Rodeo Creek Gulch.

Photograph 9: Rodeo Creek Gulch north of Highway 1 looking south (Source: Mori 2020).

Photograph 10: Existing stormwater drain along Soquel Avenue looking south (Source: Ifland 2020).

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Appendix G

Plant Compendium

EUDICOTS

VASCULAR SPECIES

ANACARDIACEAE—SUMAC OR CASHEW FAMILY

Toxicodendron diversilobum—poison oak

APIACEAE—CARROT FAMILY

* *Conium maculatum*—poison hemlock

* *Foeniculum vulgare*—fennel

Oenanthe sarmentosa—water-parsley

* *Torilis arvensis*—spreading hedgeparsley

ARALIACEAE—GINSENG FAMILY

* *Hedera helix*—English ivy

ASTERACEAE—SUNFLOWER FAMILY

Baccharis pilularis—coyote brush

* *Carduus pycnocephalus*—Italian plumeless thistle

* *Cirsium vulgare*—bull thistle

* *Hypochaeris glabra*—smooth cat's ear

* *Hypochaeris radicata*—hairy cat's ear

* *Silybum marianum*—blessed milkthistle

* *Sonchus oleraceus*—common sowthistle

BRASSICACEAE—MUSTARD FAMILY

* *Raphanus raphanistrum*—wild radish

* *Raphanus sativus*—cultivated radish

CAPRIFOLIACEAE—HONEYSUCKLE FAMILY

Symphoricarpos albus var. *laevigatus*—common snowberry

CONVOLVULACEAE—MORNING-GLORY FAMILY

* *Convolvulus arvensis*—field bindweed

CORNACEAE—DOGWOOD FAMILY

Cornus canadensis—bunchberry

FABACEAE—LEGUME FAMILY

Acmispon americanus—Spanish clover

* *Cytisus scoparius*—broom

* *Genista monspessulana*—French broom
* *Lotus corniculatus*—bird's-foot trefoil
* *Medicago polymorpha*—burclover
* *Trifolium angustifolium*—narrowleaf crimson clover
* *Vicia sativa*—garden vetch
* *Vicia villosa*—winter vetch

FAGACEAE—OAK FAMILY

Quercus agrifolia var. *agrifolia*—coast live oak
Quercus agrifolia—coast live oak

GERANIACEAE—GERANIUM FAMILY

* *Geranium dissectum*—cutleaf geranium

LAURACEAE—LAUREL FAMILY

Umbellularia californica—California bay

MYRSINACEAE—MYRSINE FAMILY

* *Lysimachia arvensis*—scarlet pimpernel

MYRTACEAE—MYRTLE FAMILY

* *Eucalyptus globulus*—Tasmanian bluegum

PAPAVERACEAE—POPPY FAMILY

Eschscholzia californica—California poppy

PLANTAGINACEAE—PLANTAIN FAMILY

* *Plantago lanceolata*—narrowleaf plantain

PLATANACEAE—PLANE TREE, SYCAMORE FAMILY

Platanus racemosa—California sycamore

POLYGONACEAE—BUCKWHEAT FAMILY

Rumex acetosella—common sheep sorrel
* *Rumex crispus*—curly dock
* *Rumex pulcher*—fiddle dock

ROSACEAE—ROSE FAMILY

* *Rubus armeniacus*—Himalayan blackberry
Rubus ursinus—California blackberry

RUBIACEAE—MADDER FAMILY

Galium aparine—stickywilly

SALICACEAE—WILLOW FAMILY

Salix laevigata—red willow

Salix lasiolepis—arroyo willow

URTICACEAE—NETTLE FAMILY

Urtica dioica—stinging nettle

GYMNOSPERMS AND GNETOPHYTES

VASCULAR SPECIES

CUPRESSACEAE—CYPRESS FAMILY

Sequoia sempervirens—redwood

MONOCOTS

VASCULAR SPECIES

ARACEAE—ARUM FAMILY

Lemna minor—common duckweed

* *Zantedeschia aethiopica*—calla lily

CYPERACEAE—SEDGE FAMILY

Cyperus eragrostis—tall flatsedge

JUNCACEAE—RUSH FAMILY

Juncus mexicanus—Mexican rush

Juncus patens—western rush

ORCHIDACEAE—ORCHID FAMILY

* *Epipactis helleborine*—broadleaf helleborine

POACEAE—GRASS FAMILY

* *Avena barbata*—slender oat

* *Avena fatua*—wild oat

* *Briza minor*—little quakinggrass

Bromus carinatus—California brome

* *Bromus diandrus*—ripgut brome

* *Bromus hordeaceus*—soft brome

Bromus laevipes—Chinook brome
* *Cynodon dactylon*—Bermudagrass
Danthonia californica—California oat grass
Elymus condensatus—giant wild rye
Elymus glaucus—blue wildrye
* *Festuca bromoides*—brome fescue
* *Festuca perennis*—perennial rye grass
* *Holcus lanatus*—common velvet grass
* *Hordeum murinum* ssp. *leporinum*—hare barley
* *Phalaris aquatica*—Harding grass
Stipa pulchra—purple needlegrass

* signifies introduced (non-native) species

Appendix H

Wildlife Compendium

BIRD

FLYCATCHERS

TYRANNIDAE—TYRANT FLYCATCHERS

Empidonax difficilis—Pacific-slope flycatcher

JAYS, MAGPIES AND CROWS

CORVIDAE—CROWS AND JAYS

Corvus brachyrhynchos—American crow

WOOD WARBLERS AND ALLIES

PARULIDAE—WOOD-WARBLERS

Setophaga coronata—yellow-rumped warbler

WRENS

TROGLODYTIDAE—WRENS

Thryomanes bewickii—Bewick's wren

NEW WORLD SPARROWS

PASSERELLIDAE—NEW WORLD SPARROWS

Melozone crissalis—California towhee

Pipilo maculatus—spotted towhee

MAMMAL

POCKET GOPHERS

GEOMYIDAE—POCKET GOPHERS

Thomomys bottae—Botta's pocket gopher

SQUIRRELS

SCIURIDAE—SQUIRRELS

Spermophilus (Otospermophilus) beecheyi—California ground squirrel

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Appendix I

Special-Status Plant Species Potentially Occurring in the BSA

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Agrostis blasdalei	Blasdale's bent grass	None/None/1B.2	Coastal bluff scrub, Coastal dunes, Coastal prairie/perennial rhizomatous herb/May–July/0–490	Not expected to occur. No suitable coastal scrub, dune or prairie habitat present within the BSA.
Amsinckia lunaris	bent-flowered fiddleneck	None/None/1B.2	Coastal bluff scrub, Cismontane woodland, Valley and foothill grassland/annual herb/Mar–June/5–1,640	Low potential to occur. Limited suitable grassland habitat occurs within the BSA south of Soquel Avenue along the eastern portion of the stormwater alignment and outfall.
Arctostaphylos andersonii	Anderson's manzanita	None/None/1B.2	Broadleafed upland forest, Chaparral, North Coast coniferous forest; openings, edges/perennial evergreen shrub/Nov–May/195–2,490	Not expected to occur. The BSA is outside of the species' known elevation range and there is no suitable upland forest or chaparral habitat present.
Arctostaphylos hookeri ssp. *hookeri*	Hooker's manzanita	None/None/1B.2	Closed-cone coniferous forest, Chaparral, Cismontane woodland, Coastal scrub; sandy/perennial evergreen shrub/Jan–June/195–1,755	Not expected to occur. The BSA is outside of the species' known elevation range and there is no suitable coniferous forest, cismontane woodland, or chaparral habitat present.
Arctostaphylos pajaroensis	Pajaro manzanita	None/None/1B.1	Chaparral (sandy)/perennial evergreen shrub/Dec–Mar/95–2,490	Not expected to occur. No suitable chaparral habitat is present within the BSA.
Arctostaphylos silvicola	Bonny Doon manzanita	None/None/1B.2	Closed-cone coniferous forest, Chaparral, Lower montane coniferous forest; inland marine sands/perennial evergreen shrub/Jan–Mar/390–1,965	Not expected to occur. The BSA is outside of the species' known elevation range and there is no suitable habitat present.
Arenaria paludicola	marsh sandwort	FE/SE/1B.1	Marshes and swamps (freshwateror brackish); sandy, openings/perennial stoloniferous herb/May–Aug/5–560	Low potential to occur. Limited suitable freshwater marsh habitat occurs within the riparian woodland east of the stormdrain outlet. No known occurrences within 5 miles of the BSA. Known occurrences limited to San Luis Obispo County and reintroduction sites in Santa Cruz, Nipomo, and Los Osos.
Calyptridium parryi var. *hesseae*	Santa Cruz Mountains pussypaws	None/None/1B.1	Chaparral, Cismontane woodland; sandy or gravelly, openings/annual herb/May–Aug/1,000–5,015	Not expected to occur. The BSA is outside of the species' known elevation range and there is no suitable habitat present.
Campanula californica	swamp harebell	None/None/1B.2	Bogs and fens, Closed-cone coniferous forest, Coastal prairie, Meadows and seeps, Marshes and swamps (freshwater), North Coast coniferous forest; mesic/perennial rhizomatous herb/June–Oct/0–1,325	Low potential to occur. Limited suitable freshwater marsh habitat occurs within the riparian woodland east of the proposed stormwater outlet. No known occurrences within 5 miles of the BSA. Known historic occurrence near Camp Evers, Scotts Valley.
Carex comosa	bristly sedge	None/None/2B.1	Coastal prairie, Marshes and swamps (lake margins), Valley and foothill grassland/perennial rhizomatous herb/May–Sep/0–2,050	Low potential to occur. Limited suitable freshwater marsh habitat occurs within the riparian woodland east of the proposed stormwater outlet. No known occurrences within 5 miles of the BSA.
Carex saliniformis	deceiving sedge	None/None/1B.2	Coastal prairie, Coastal scrub, Meadows and seeps, Marshes and swamps (coastal salt); mesic/perennial rhizomatous herb/June(July)/5–755	Low potential to occur. Limited suitable freshwater marsh habitat occurs within the riparian woodland east of the proposed stormwater outlet. No known occurrences within 5 miles of the BSA.
Ceanothus ferrisiae	Coyote ceanothus	FE/None/1B.1	Chaparral, Coastal scrub, Valley and foothill grassland; serpentinite/perennial evergreen shrub/Jan–May/390–1,505	Not expected to occur. The BSA is outside of the species' known elevation range.
Centromadia parryi ssp. *congdonii*	Congdon's tarplant	None/None/1B.1	Valley and foothill grassland (alkaline)/annual herb/May–Oct(Nov)/0–755	Low potential to occur. Limited suitable grassland habitat occurs within the BSA south of Soquel Avenue along the eastern portion of the stormwater alignment and outfall.
Chorizanthe pungens var. *hartwegiana*	Ben Lomond spineflower	FE/None/1B.1	Lower montane coniferous forest (maritime ponderosa pine sandhills)/annual herb/Apr–July/295–2,000	Not expected to occur. The BSA is outside of the species' known elevation range and there is no suitable habitat present.
Chorizanthe pungens var. *pungens*	Monterey spineflower	FT/None/1B.2	Chaparral (maritime), Cismontane woodland, Coastal dunes, Coastal scrub, Valley and foothill grassland; sandy/annual herb/Apr–June(July–Aug)/5–1,475	Low potential to occur. Limited suitable grassland habitat occurs within the BSA south of Soquel Avenue along the eastern portion of the stormwater alignment and outfall.
Chorizanthe robusta var. *hartwegii*	Scotts Valley spineflower	FE/None/1B.1	Meadows and seeps (sandy), Valley and foothill grassland (mudstone and Purisima outcrops)/annual herb/Apr–July/750–805	Not expected to occur. The BSA is outside of the species' known elevation range.

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Chorizanthe robusta var. *robusta*	robust spineflower	FE/None/1B.1	Chaparral (maritime), Cismontane woodland (openings), Coastal dunes, Coastal scrub; sandy or gravelly/annual herb/Apr–Sep/5–985	Not expected to occur. Known occurrences from Pogonip within upland grassland habitat. However, no suitable habitat present within the BSA.
Collinsia multicolor	San Francisco collinsia	None/None/1B.2	Closed-cone coniferous forest, Coastal scrub; sometimes serpentinite/annual herb/(Feb)Mar–May/95–820	Not expected to occur. No suitable coniferous forest or coastal scrub habitat present within the BSA.
Cordylanthus rigidus ssp. *littoralis*	seaside bird's-beak	None/SE/1B.1	Closed-cone coniferous forest, Chaparral (maritime), Cismontane woodland, Coastal dunes, Coastal scrub; sandy, often disturbed sites/annual herb (hemiparasitic)/Apr–Oct/0–1,685	Not expected to occur. No suitable coniferous forest, chaparral, cismontane woodland, coastal dunes, or coastal scrub habitat present within the BSA.
Dacryophyllum falcifolium	tear drop moss	None/None/1B.3	North Coast coniferous forest; carbonate/moss/N.A./160–900	Not expected to occur. The BSA is outside of the species' known elevation range and there is no suitable habitat present.
Eriogonum nudum var. *decurrens*	Ben Lomond buckwheat	None/None/1B.1	Chaparral, Cismontane woodland, Lower montane coniferous forest (maritime ponderosa pine sandhills); sandy/perennial herb/June–Oct/160–2,620	Not expected to occur. The BSA is outside of the species' known elevation range and there is no suitable habitat present.
Erysimum ammophilum	sand-loving wallflower	None/None/1B.2	Chaparral (maritime), Coastal dunes, Coastal scrub; sandy, openings/perennial herb/Feb–June/0–195	Not expected to occur. No suitable chaparral, coastal dunes, or coastal scrub habitat present within the BSA.
Erysimum teretifolium	Santa Cruz wallflower	FE/SE/1B.1	Chaparral, Lower montane coniferous forest; inland marine sands/perennial herb/Mar–July/390–2,000	Not expected to occur. The BSA is outside of the species' known elevation range and there is no suitable habitat present.
Fissidens pauperculus	minute pocket moss	None/None/1B.2	North Coast coniferous forest (damp coastal soil)/moss/N.A./30–3,355	Not expected to occur. No suitable coniferous forest habitat present within the BSA.
Gilia tenuiflora ssp. *arenaria*	Monterey gilia	FE/ST/1B.2	Chaparral (maritime), Cismontane woodland, Coastal dunes, Coastal scrub; sandy, openings/annual herb/Apr–June/0–150	Not expected to occur. No suitable chaparral, cismontane woodland, coastal dune, or coastal scrub habitat present within the BSA.
Hesperocyparis abramsiana var. *abramsiana*	Santa Cruz cypress	FT/SE/1B.2	Closed-cone coniferous forest, Chaparral, Lower montane coniferous forest; sandstone or granitic/perennial evergreen tree/N.A./915–2,620	Not expected to occur. The BSA is outside of the species' known elevation range and there is no suitable habitat present.
Hoita strobilina	Loma Prieta hoita	None/None/1B.1	Chaparral, Cismontane woodland, Riparian woodland; usually serpentinite, mesic/perennial herb/May–July(Aug–Oct)/95–2,820	Not expected to occur. Suitable riparian woodland habitat, but no serpentine soils present within BSA. No known occurrences within 5 miles of the BSA.
Holocarpha macradenia	Santa Cruz tarplant	FT/SE/1B.1	Coastal prairie, Coastal scrub, Valley and foothill grassland; often clay, sandy/annual herb/June–Oct/30–720	Low potential to occur. Species is known from Arana Gulch greenbelt, Schwan Lagoon area, and Soquel. However, there is limited suitable grassland habitat within the BSA south of Soquel Avenue along the eastern portion of the stormwater alignment and outfall. Nearest CNDDB occurrence is approxiamtely 0.24 miles from the proposed work areas (CDFW 2020).
Horkelia cuneata var. *sericea*	Kellogg's horkelia	None/None/1B.1	Closed-cone coniferous forest, Chaparral (maritime), Coastal dunes, Coastal scrub; sandy or gravelly, openings/perennial herb/Apr–Sep/30–655	Not expected to occur. No suitable coastal scrub or pine forests present within the BSA.
Horkelia marinensis	Point Reyes horkelia	None/None/1B.2	Coastal dunes, Coastal prairie, Coastal scrub; sandy/perennial herb/May–Sep/15–2,475	Not expected to occur. No suitable coastal dune, prairie, or scrub habitat present within the BSA.
Lasthenia californica ssp. *macrantha*	perennial goldfields	None/None/1B.2	Coastal bluff scrub, Coastal dunes, Coastal scrub/perennial herb/Jan–Nov/15–1,705	Not expected to occur. No suitable coastal bluff scrub, coastal dunes, or coastal scrub habitat present within the BSA.
Lessingia micradenia var. *glabrata*	smooth lessingia	None/None/1B.2	Chaparral, Cismontane woodland, Valley and foothill grassland; serpentinite, often roadsides/annual herb/(Apr–June)July–Nov/390–1,375	Not expected to occur. The BSA is outside of the species' known elevation range and there is no suitable habitat present.
Malacothamnus arcuatus	arcuate bush-mallow	None/None/1B.2	Chaparral, Cismontane woodland/perennial evergreen shrub/Apr–Sep/45–1,160	Not expected to occur. No suitable chaparral or cismontane woodland habitat present within the BSA.

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Microseris paludosa	marsh microseris	None/None/1B.2	Closed-cone coniferous forest, Cismontane woodland, Coastal scrub, Valley and foothill grassland/perennial herb/Apr–June(July)/15–1,160	Low potential to occur. No suitable coniferous forest, cismontane woodland, or coastal scrub habitat present within the BSA. However, there is limited suitable grassland habitat occurs within the BSA south of Soquel Avenue along the eastern portion of the stormwater alignment and outfall.
Monardella sinuata ssp. *nigrescens*	northern curly-leaved monardella	None/None/1B.2	Chaparral (SCR Co.), Coastal dunes, Coastal scrub, Lower montane coniferous forest (SCR Co., ponderosa pine sandhills); Sandy./annual herb/(Apr)May–July(Aug–Sep)/0–985	Not expected to occur. No suitable chaparral, coastal dunes, coastal scrub, or coniferous forest habitat present within the BSA.
Monolopia gracilens	woodland woolythreads	None/None/1B.2	Broadleafed upland forest (openings), Chaparral (openings), Cismontane woodland, North Coast coniferous forest (openings), Valley and foothill grassland; Serpentine/annual herb/(Feb)Mar–July/325–3,935	Not expected to occur. The BSA is outside of the species' known elevation range.
Pedicularis dudleyi	Dudley's lousewort	None/SR/1B.2	Chaparral (maritime), Cismontane woodland, North Coast coniferous forest, Valley and foothill grassland/perennial herb/Apr–June/195–2,950	Not expected to occur. The BSA is outside of the species' known elevation range.
Penstemon rattanii var. *kleei*	Santa Cruz Mountains beardtongue	None/None/1B.2	Chaparral, Lower montane coniferous forest, North Coast coniferous forest/perennial herb/May–June/1,310–3,605	Not expected to occur. The BSA is outside of the species' known elevation range and there is no suitable habitat present.
Pentachaeta bellidiflora	white-rayed pentachaeta	FE/SE/1B.1	Cismontane woodland, Valley and foothill grassland (often serpentinite)/annual herb/Mar–May/110–2,030	Low potential to occur. Species is known from Arana Gulch greenbelt, Schwan Lagoon area, and Soquel. However, there is limited suitable grassland habitat within the BSA south of Soquel Avenue along the eastern portion of the stormwater alignment and outfall. There are no CNDDB occurrences of this species within 5 miles of the proposed work areas (CDFW 2020).
Piperia candida	white-flowered rein orchid	None/None/1B.2	Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest; sometimes serpentinite/perennial herb/(Mar)May–Sep/95–4,295	Not expected to occur. No suitable broadleaf upland or coniferous forest habitat present within the BSA.
Piperia yadonii	Yadon's rein orchid	FE/None/1B.1	Coastal bluff scrub, Closed-cone coniferous forest, Chaparral (maritime); sandy/perennial herb/(Feb)May–Aug/30–2,475	Not expected to occur. No suitable coastal bluff scrub, coniferous forest, or chaparral habitat present within the BSA.
Plagiobothrys chorisianus var. *chorisianus*	Choris' popcornflower	None/None/1B.2	Chaparral, Coastal prairie, Coastal scrub; mesic/annual herb/Mar–June/5–525	Not expected to occur. No suitable chaparral, coastal prairie, or coastal scrub habitat present within the BSA.
Plagiobothrys diffusus	San Francisco popcornflower	None/SE/1B.1	Coastal prairie, Valley and foothill grassland/annual herb/Mar–June/195–1,180	Not expected to occur. The BSA is outside of the species' known elevation range.
Polygonum hickmanii	Scotts Valley polygonum	FE/SE/1B.1	Valley and foothill grassland (mudstone and sandstone)/annual herb/May–Aug/685–820	Not expected to occur. The BSA is outside of the species' known elevation range.
Senecio aphanactis	chaparral ragwort	None/None/2B.2	Chaparral, Cismontane woodland, Coastal scrub; sometimes alkaline/annual herb/Jan–Apr(May)/45–2,620	Not expected to occur. No suitable chaparral, cismontane woodland, or coastal scrub habitat present within the BSA.
Silene verecunda ssp. *verecunda*	San Francisco campion	None/None/1B.2	Coastal bluff scrub, Chaparral, Coastal prairie, Coastal scrub, Valley and foothill grassland; sandy/perennial herb/(Feb)Mar–June(Aug)/95–2,115	Low potential to occur. Limited suitable grassland habitat occurs within the BSA south of Soquel Avenue along the eastern portion of the stormwater alignment and outfall. Known occurrences from the Swanton area.
Stebbinsoseris decipiens	Santa Cruz microseris	None/None/1B.2	Broadleafed upland forest, Closed-cone coniferous forest, Chaparral, Coastal prairie, Coastal scrub, Valley and foothill grassland; open areas, sometimes serpentinite/annual herb/Apr–May/30–1,640	Low potential to occur. Limited suitable grassland habitat occurs within the BSA south of Soquel Avenue along the eastern portion of the stormwater alignment and outfall.

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Trifolium buckwestiorum	Santa Cruz clover	None/None/1B.1	Broadleafed upland forest, Cismontane woodland, Coastal prairie; gravelly, margins/annual herb/Apr–Oct/340–2,000	Not expected to occur. Known occurrences from Swanton area and Soquel (margins of upland forest and grasslands). However, the BSA is outside of the species' known elevation range.
Trifolium hydrophilum	saline clover	None/None/1B.2	Marshes and swamps, Valley and foothill grassland (mesic, alkaline), Vernal pools/annual herb/Apr–June/0–985	Low potential to occur. Limited suitable freshwater marsh habit occurs within the riparian woodland. No known occurrences within 5 miles of biological study area. Known occurrences limited to San Luis Obispo County and reintroduction sites in Santa Cruz, Nipomo, and Los Osos.

Appendix J

Special-Status Wildlife Species Potentially Occurring in the BSA

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Amphibians				
Ambystoma californiense	California tiger salamander	FT/ST, WL	Annual grassland, valley–foothill hardwood, and valley–foothill riparian habitats; vernal pools, other ephemeral pools, and (uncommonly) along stream courses and man-made pools if predatory fishes are absent	Not expected to occur. No suitable breeding pools with adjacent upland scrub and woodland habitat for this species is present within the BSA.
Ambystoma macrodactylum croceum	Santa Cruz long-toed salamander	FE/FP, SE	Dense riparian vegetation, thick coastal scrub, and oak woodland	Not expected to occur. No suitable breeding pools for this species occur within the BSA. Suitable riparian vegetation and oak woodland occurs, but is surrounded by development. Nearest CNDDB occurrence is approxiamtely 5 miles from the proposed work areas (CDFW 2020).
Aneides flavipunctatus niger	Santa Cruz black salamander	None/SSC	Restricted to mesic forests in the fog belt of the outer Coast Range of San Mateo, Santa Cruz, and Santa Clara counties. Mixed deciduous and coniferous woodlands and coastal grasslands. Occurs in moist streamside microhabitats and is found under rocks, talus, and damp woody debris.	Not expected to occur. The BSA lacks mesic forests to support these species and also lacks suitable microhabitats. The nearest CNDDB occurrence is approximately 2 miles from the proposed work areas (CDFW 2020).
Dicamptodon ensatus	California giant salamander	None/SSC	Known from wet coastal forests and chaparral near streams and seeps from Mendocino Co. south to Monterey Co. and east to Napa Co. Aquatic larvae found in cold, clear streams, occasionally in lakes and ponds. Adults known from wet forests under rocks and logs near streams and lakes.	Low potential to occur. The BSA lacks suitable wet coastal forests and is surrounded by development. The nearest CNDDB occurrence is approximately 1.1 miles from the proposed work areas (CDFW 2020).
Rana boylii	foothill yellow-legged frog	None/SSC, PST	Rocky streams and rivers with open banks in forest, chaparral, and woodland	Not expected to occur. The BSA lacks suitable streams and rivers to support this species. The nearest CNDDB occurrence is approximately 1 mile from the proposed work areas in Soquel Creek (CDFW 2020).
Rana draytonii	California red-legged frog	FT/SSC	Lowland streams, wetlands, riparian woodlands, livestock ponds; dense, shrubby or emergent vegetation associated with deep, still or slow-moving water; uses adjacent uplands	Low potential to occur. The BSA lacks suitable streams and emergent habitat to support this species. The nearest CNDDB occurrence is approximately 4.57 miles north of the proposed work areas (CDFW 2020).
Reptiles				
Actinemys marmorata	northwestern pond turtle	None/SSC	Slow-moving permanent or intermittent streams, ponds, small lakes, and reservoirs with emergent basking sites; adjacent uplands used for nesting and during winter	Moderate potential to occur. The BSA supports marginally suitable aquatic habitat south of Soquel Avenue along the eastern portion of the stormwater alignment and outfall.
Anniella pulchra	northern California legless lizard	None/SSC	Coastal dunes, stabilized dunes, beaches, dry washes, valley–foothill, chaparral, and scrubs; pine, oak, and riparian woodlands; associated with sparse vegetation and sandy or loose, loamy soils	Not expected to occur. The BSA lacks the sandy or loose, loamy soils to support this species. Additionally, the vegetation onsite was thick and overgrown.
Birds				
*Agelaius tricolor (*nesting colony)	tricolored blackbird	BCC/SSC, ST	Nests near freshwater, emergent wetland with cattails or tules, but also in Himalayan blackberrry; forages in grasslands, woodland, and agriculture	Not expected to occur. Although there is marginal nesting substrate present, no foraging habitat is present within the vicinity of the BSA. Additionally, the BSA is surrounded by residential and commercial development.
*Aquila chrysaetos (*nesting & wintering)	golden eagle	BCC/FP, WL	Nests and winters in hilly, open/semi-open areas, including shrublands, grasslands, pastures, riparian areas, mountainous canyon land, open desert rimrock terrain; nests in large trees and on cliffs in open areas and forages in open habitats	Not expected to occur. The BSA lacks suitable nesting habitat for this species. There are no CNDDB occurrences of this species within 5 miles of the proposed work areas (CDFW 2020).
*Asio flammeus (*nesting*)*	short-eared owl	None/SSC	Grassland, prairies, dunes, meadows, irrigated lands, and saline and freshwater emergent wetlands	Not expected to occur. The BSA lacks suitable nesting habitat for this species. There are no CNDDB occurrences of this species within 5 miles of the proposed work areas (CDFW 2020).
*Athene cunicularia (*burrow sites & some wintering sites*)*	burrowing owl	BCC/SSC	Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows	Not expected to occur. The BSA lacks the open habitat suitable for burrows or foraging for this species. No suitable burrows were observed. The BSA is surrounded by residential and commercial development.
*Brachyramphus marmoratus (*nesting*)*	marbled murrelet	FT/SE	Nests in old-growth coastal forests, forages in subtidal and pelagic habitats	Not expected to occur. The BSA lacks suitable old-growth coastal forest nesting habitat for this species. Additionally, no foraging habitat is available for this species. The BSA is surrounded by residential and commerical development.

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Charadrius alexandrinus nivosus (nesting)	western snowy plover	FT, BCC/SSC	On coasts nests on sandy marine and estuarine shores; in the interior nests on sandy, barren or sparsely vegetated flats near saline or alkaline lakes, reservoirs, and ponds	Not expected to occur. The BSA lacks suitable barren flats near saline/alkaline lake, reservoirs, or ponds for this species.
Coturnicops noveboracensis	yellow rail	BCC/SSC	Nesting requires wet marsh/sedge meadows or coastal marshes with wet soil and shallow, standing water	Not expected to occur. The BSA lacks suitable meadows or marshes to support this species.
Cypseloides niger (nesting)	black swift	BCC/SSC	Nests in moist crevices, caves, and cliffs behind or adjacent to waterfalls in deep canyons; forages over a wide range of habitats	Not expected to occur. The BSA does not support suitable nesting habitat for this species.
Elanus leucurus (nesting)	white-tailed kite	None/FP	Nests in woodland, riparian, and individual trees near open lands; forages opportunistically in grassland, meadows, scrubs, agriculture, emergent wetland, savanna, and disturbed lands	Low potential to occur. Although the BSA contains suitable riparian/woodland nesting habitat for this species, it is surrounded by residential and commercial development and foraging habitat is limited. The nearest CNDDB occurrence is approximately 5 miles from the proposed work areas (CDFW 2020).
Falco peregrinus anatum (nesting)	American peregrine falcon	FDL, BCC/FP, SDL	Nests on cliffs, buildings, and bridges; forages in wetlands, riparian, meadows, croplands, especially where waterfowl are present	Not expected to occur. The BSA lacks suitable cliffs, buildings, or bridges for this species to nest. Additionally, this species is not expected to forage within the BSA due to lack of suitable habitat.
Laterallus jamaicensis coturniculus	California black rail	BCC/FP, ST	Tidal marshes, shallow freshwater margins, wet meadows, and flooded grassy vegetation; suitable habitats are often supplied by canal leakage in Sierra Nevada foothill populations	Not expected to occur. The BSA lacks suitable wetland or marsh habitat for this species to nest. Additionally, the BSA is surrounded by residential and commercial development.
Rallus obsoletus obsoletus	Ridgway's rail	FE/SE, FP	Coastal salt or brackish marshes	Not expected to occur. The BSA lacks suitable coastal or brackish marshes for this species to nest. There are no CNDDB occurrences of this species within 5 miles of the proposed work areas (CDFW 2020).
Riparia riparia (nesting)	bank swallow	None/ST	Nests in riparian, lacustrine, and coastal areas with vertical banks, bluffs, and cliffs with sandy soils; open country and water during migration	Not expected to occur. The BSA lacks suitable vertical bank, bluff, or cliff habitat for this species to nest.
Fishes				
Eucyclogobius newberryi	tidewater goby	FE/SSC	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County, to the mouth of the Smith River	Not expected to occur. The BSA does not support suitable brackish water habitats for this species. This species has been documented approximately 0.6 mile downstream of the BSA downstream within Rodeo Creek and Corcoran lagoon (CNDDB 2020).
Oncorhynchus kisutch pop. 4	coho salmon - central California coast ESU	FE/SE	Streams and small freshwater tributaries during first half of life cycle and estuarine and marine waters of the Pacific Ocean during the second half of life cycle. Spawns in small streams with stable gravel substrates.	Not expected to occur. The BSA is inaccessible to anadromous fish and lacks habitat to support this species.
Oncorhynchus mykiss irideus pop. 8	steelhead - central California coast DPS	FT/None	Coastal basins from Redwood Creek south to the Gualala River, inclusive; does not include summer-run steelhead	Not expected to occur. May occur in lower Rodeo creek but barriers and ephemeral creek sections prevent anadromous fish from accessing the BSA.
Oncorhynchus mykiss irideus pop. 9	steelhead - south-central California coast DPS	FT/None	Coastal basins from Redwood Creek south to the Gualala River, inclusive; does not include summer-run steelhead	Not expected to occur. The BSA is outside the species' known geographic range.
Spirinchus thaleichthys	longfin smelt	FC/ST	Aquatic, estuary	Not expected to occur. The BSA lacks suitable estuarine habitat to support this species.
Thaleichthys pacificus	eulachon	FT/None	Found in Klamath River, Mad River, and Redwood Creek and in small numbers in Smith River and Humboldt Bay tributaries	Not expected to occur. The BSA lacks suitable habitat to support this species and is outside the species' known geographic range.
Mammals				
Antrozous pallidus	pallid bat	None/SSC	Grasslands, shrublands, woodlands, forests; most common in open, dry habitats with rocky outcrops for roosting, but also roosts in man-made structures and trees	Moderate potential to occur. The BSA lacks suitable outcrops/structures for this species to roost, but may support potential foraging opportunities. There are no CNDDB occurrences of this species within 5 miles of the proposed work areas (CDFW 2020).
Corynorhinus townsendii	Townsend's big-eared bat	None/SSC	Mesic habitats characterized by coniferous and deciduous forests and riparian habitat, but also xeric areas; roosts in limestone caves and lava tubes, man-made structures, and tunnels	Moderate potential to occur. The BSA lacks suitable caves, tubes, structures and tunnels for this species to roost, but may support potential foraging opportunities. The nearest CNDDB occurrence is approximately 4.98 miles from the proposed work areas (CDFW 2020).
Neotoma fuscipes annectens	San Francisco dusky-footed woodrat	None/SSC	Forest habitats with a moderate canopy and moderate to dense understory	Low potential to occur. Rodeo Creek Gulch has riparian areas that could provide potential habitat for this species but is lacking mature dense forest habitat prefered by

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
				the species and is in an urbanized setting. The nearest documented CNDDB occurrence is approximately 4.5 miles from the proposed work areas (CDFW 2020).
Sorex ornatus salarius	Monterey shrew	None/SSC	Saltmarsh, riparian, wetlands, uplands of Salinas River Delta	Not expected to occur. The BSA lacks suitable habitat for this species and is surrounded by residential and commercial development.
Taxidea taxus	American badger	None/SSC	Dry, open, treeless areas; grasslands, coastal scrub, agriculture, and pastures, especially with friable soils	Not expected to occur. The BSA lacks suitable grasslands and coastal scrub to support this species. Additionally, the BSA is surrounded by residential and commercial development.
Invertebrates				
Cicindela ohlone	Ohlone tiger beetle	FE/None	Remnant native grasslands with California oatgrass (Danthonia californica) and purple needlegrass (Stipa pulchra) in Santa Cruz County	Not expected to occur. The BSA lacks suitable grassland habitat to support this species.
Euphilotes enoptes smithi	Smith's blue butterfly	FE/None	Sand dunes, scrub, chaparral, grassland, and their ecotones	Not expected to occur. The BSA lacks suitable habitat to support this species.
Polyphylla barbata	Mount Hermon (=barbate) June beetle	FE/None	Known only from sand hills in vicinity of Mount Hermon, Santa Cruz County	Not expected to occur. The BSA lacks suitable habitat to support this species.
Trimerotropis infantilis	Zayante band-winged grasshopper	FE/None	Isolated sandstone deposits in the Santa Cruz Mountains (the Zayante Sand Hills ecosystem)	Not expected to occur. The BSA lacks suitable habitat to support this species.

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